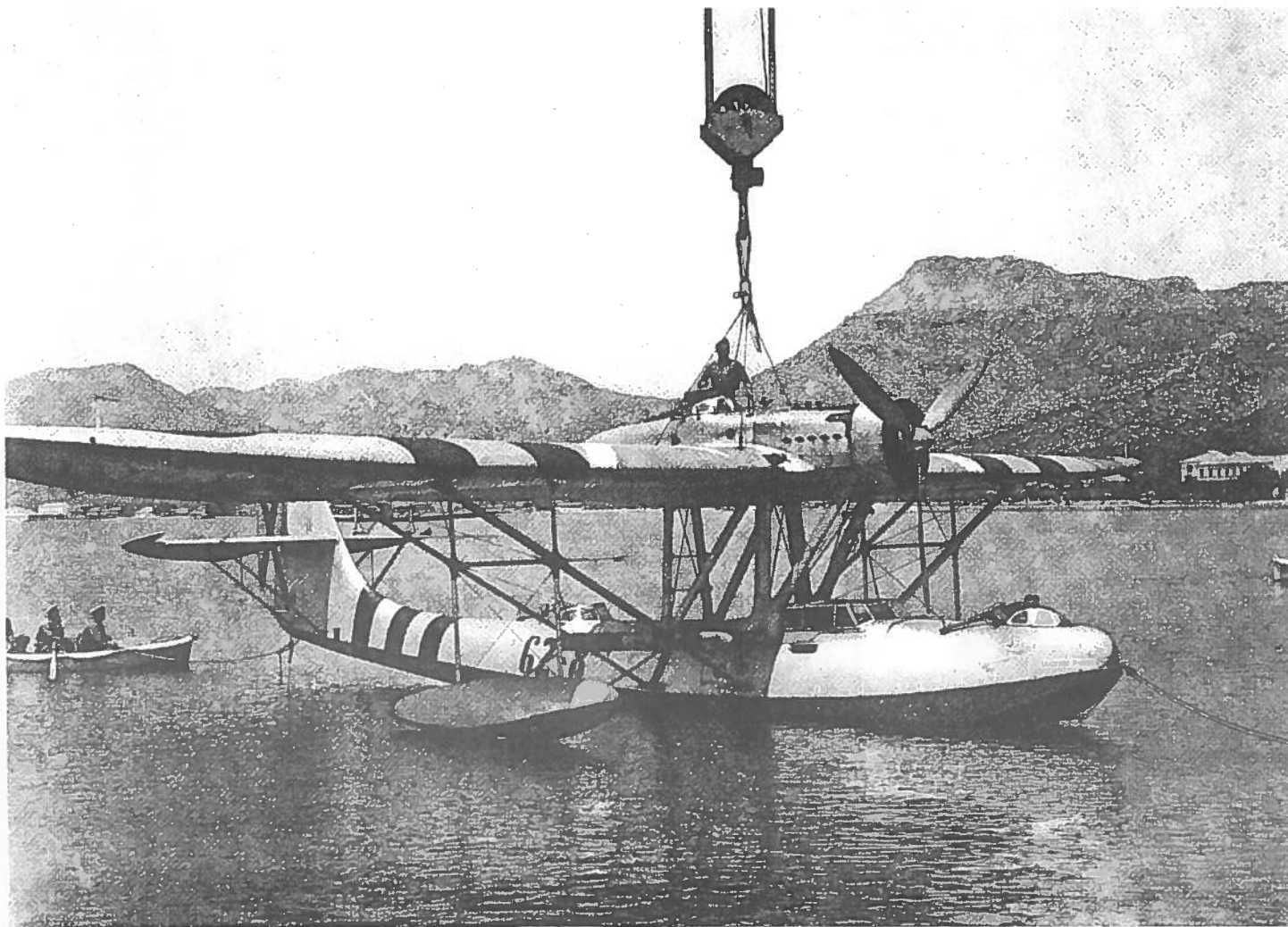


small air forces observer

vol. 29 no. 3 (115)
January 2006

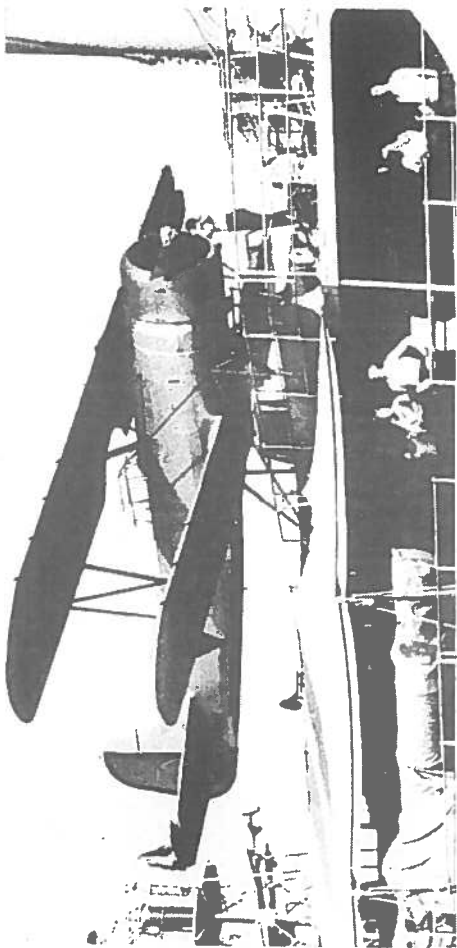
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**Bristol Bulldogs of the Baltic Republics
Aviacion Naval Ecuatoriana Cessa 337
Italian Seaplanes in Spanish Service
Dutch Naval Aviation in Combat**

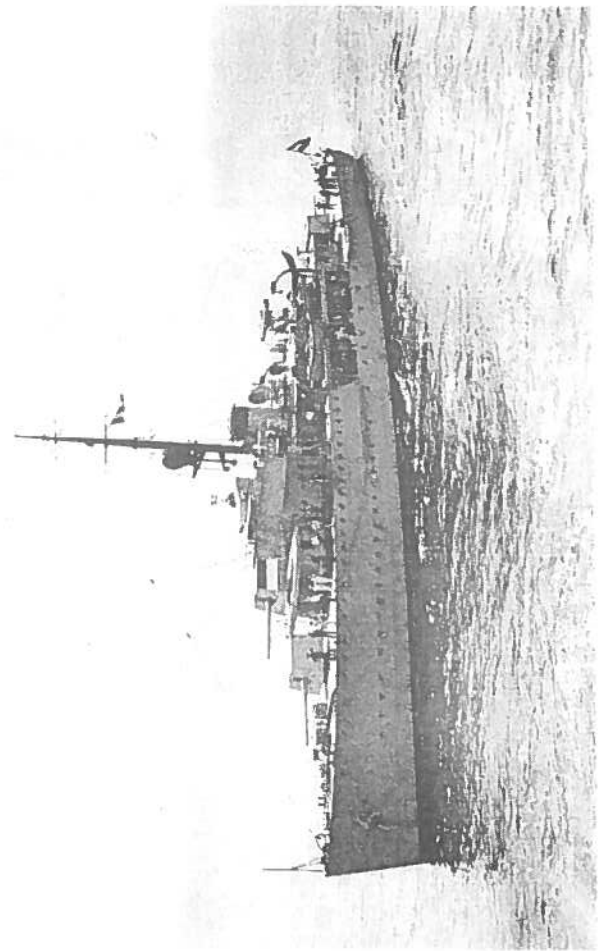
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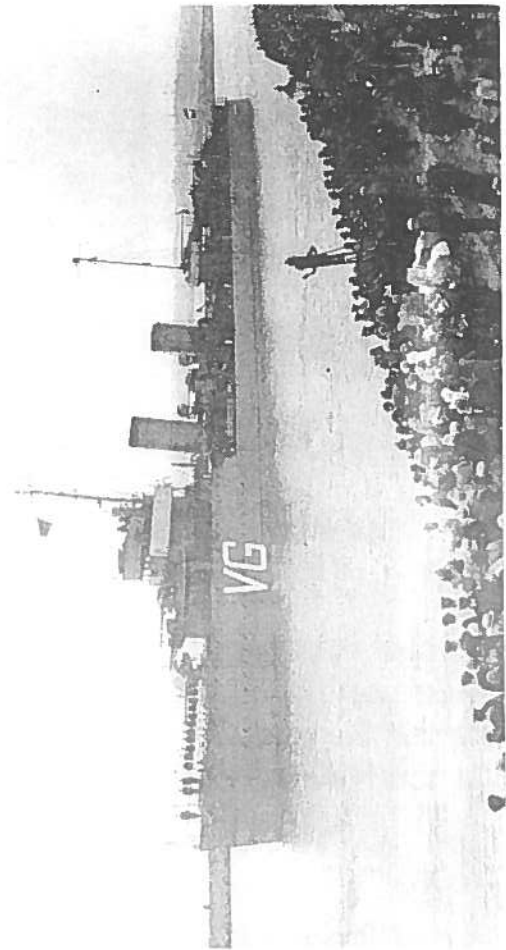
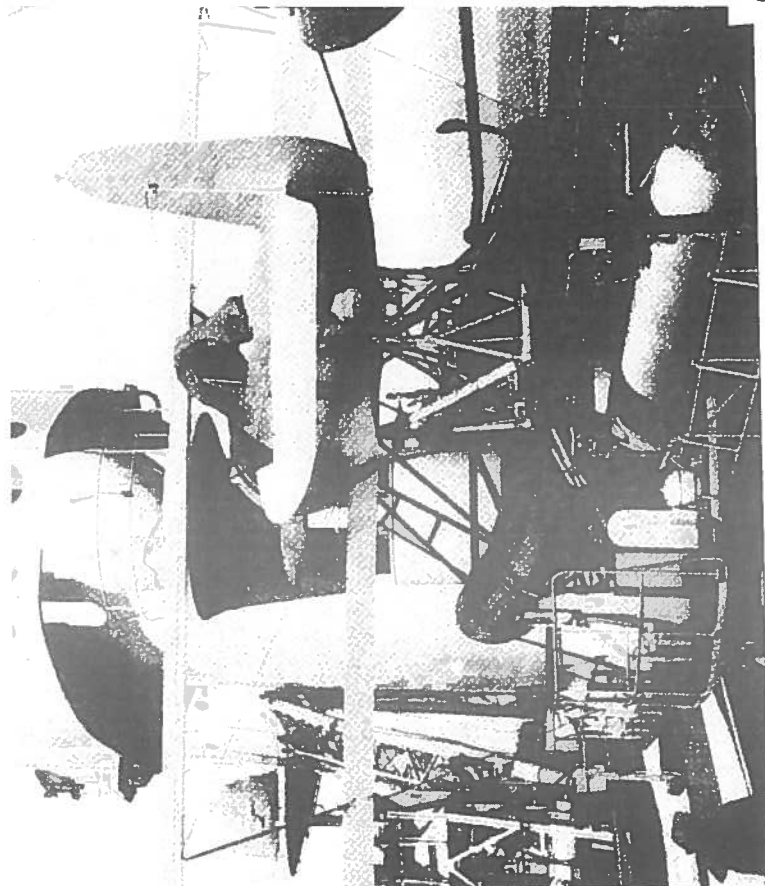
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SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearing House

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SAFCH WEB SITE: See SAFO photos in color and chat with members at www.bartoli.com/saf

COVER COMMENTS: During the Spanish Civil War (1936-1939), Italian-built seaplanes served on both the Republican and Nationalist sides. A comprehensive study of the combat activities of these seaplanes, prepared by Tullio Marcon with the collaboration of Angelo Emiliani, was published in the Italian journal *AeroFan*, April-June 2005. The translation of this article is reprinted in this issue of SAFO by the permission of the editor of *AeroFan*, Giorgio Apostoloi.

The cover photo for this issue of SAFO shows a Nationalist CANT Z.501 '62-8' in the harbor at Palma on the island of Majorca in the Balearic Islands. Three of these seaplanes formed the initial compliment of *Grupo 2G-62*.

The long range of the Z.501 and the location of their base at Palma, about equidistant from Spain, France, and Corsica, made them ideal aircraft to search the western Mediterranean Sea for ships transiting from France and Russia attempting to break the Nationalist blockade.

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"I'm currently looking for 1/72 scale Bulgarian markings for Dewoitine D.520, Bf 109 and Avia B.534 fighters. Aviation USK used to produce a sheet, but except for two crosses all the others and

the codes lacked the black borders visible in photos. Any idea whether USK have revised their sheet or someone else does a better one? The type of

markings I'm looking for are visible in photos of D.520s published in AVIONS #133. " Sid Napier (SAFCH #1521), Burgstrasse 2, CH-4107 Ettingen, Switzerland.

ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$40. International payment is best handled via Paypal at iansharyn@bigpond.com.au).

[Editor's note: The APMA Newsletter is one of the best magazines around for the modeler. The articles are written so that the modeler can comfortably tackle any of the projects. And, the variety of the subjects is unmatched anywhere else. For example, in this issue there are articles on building a Fairmile 'B' Class Motor Launch", Van Diemen Formula Fords, Jordanian Special Forces M109A2 in UN Service, and a Spanish Civil War Carros De Combate". The drawings for all of these are so complete that I won't hesitate to take on any of these projects, if I didn't have so many half-finished projects above my workbench.]

OFH NACHRICHTEN (Oesterrichische Flugzug
Historiker, Pfenninggeldf 18/2/14, A-1160 Wien.
Write for free sample.)

3/05 (40 pages). "50 Jahre Luftstreitkräfte" 9 pages including 7 b&w photos, 2 color photos, and 45 color side-view drawings of every type of a/c used by the Austrian AF since 1955. [Ed: The drawings are small, but very colorful.] "Italiener, Oesterreicher, Pole: Oberst FP Camillo Perini" 2 pages including 5 photos (including his personal Hannover CL.II '82' in Polish markings).

THE CATALINA NEWS (Val Thomas, The Catalina Society, Duxford Airfield, Cambs, CB2 3QR, England. One year £15. Web Site: www.catalina.org.uk.)

#60 September 2005 (24 pages) Entire issue is devoted to the Society's Catalina G-PBYA newly painted as USAAF OA-10A '44-33915'. The original Cat was shot down by a Me-262 on 30 March 1945 while on a rescue mission over the North Sea. The complete story of this mission, and the subsequent ordeal of the crew is told in this issue. There's a total of 21 photos – three of them full page. [Ed: Each time I receive an issue of the Catalina News, I think "No news of small air force interest, again!", but I always find myself reading it cover to cover before I can put it down. It's a darn good read.]

MUSHROOM MODEL MAGAZINE (Roger Wallsgrave, 36 Ver Road, Redbourn, Herts AL3 7PE, UK. £3.95 each.. Each issue has 8 pages of colour. (North American subscription agent: Wise Owl Publications, 5150 Candlewood St., Suite #1, Lakewood, CA 90712-1900. \$32.00. E-mail: info@wiseowlmagazines.com.

SWEDISH AIRFORCE SIG (Harold Rowell, 80
Cambridge Ave., Marton, Middlesbrough,
Cleveland, TS7 8EG, England. E-mail:
pauline.rowell@ntlworld.com. Subscription £5.00
UK, £6.00 Europe, £9.00 USA.

#53/54 2005 (17 pages) "HKP 1 - Vertol 44 - Bananen" 10 pages including 2 pages of drawings of details, 5 side-view drawings, and a 2-page multi-view drawing. "Constructing an HKP 4" 3 pages including two multi-view drawings.

IPMS-MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues \$20.00, no check accepted due to the high redemption costs). Now with captions in English.

#159 3-4/2005 (28 pages) "MiG-21F-13" 10 pages including 28 photos (all of details except for 3 of Finnish MiGs). "Finnair Airbus A319/320/321" 7 pages including 24 photos of details.

LEHTI (Pentti Manninen, Jakomäentie 8 b C 300, 00770 Helsinki. Subscription: Europe 26 euro, elsewhere 32 euro or 42 USD. Payment by International Postal Order or in cash notes; no cheques accepted because of high redemption rates). Each issue includes a 2-page English summary.

2/2005 (24 pages) "Bristol 170: Slow, Ugly, and Uneconomical" 6 pages on the Finnish airline Aero Oy's interest in the Bristol 170 including 6 photos. "Performance of Piston-Engine Fighter (Part 6)" 4 pages with one photos (Bf 109) and 3 charts. "Allied Peace Supervision Commission Visiting Jami in May 1945" 2 pages including one photo (Soviet Po-2). "Camouflage Testing by Finnish AF in 1940-41" 3 pages including one photo and multi-view drawings of Finnish I-16 and VL Pryr in experimental camouflage. "Shortage of Aircraft-Grade Timber in 1938" 2 pages. "Machine-Gun Cameras in BF 109G in 1946-54" 3 pages including 3 photos. "Aerial Victories: AA-Artillery Shoot Down" one page.

AIR MAGAZINE, TMA, 75 rue Claude Decaen, 75012 Paris, France. Six issues a year. 35 euros in France, 41 euros in Europe, and 50 euros for the rest of the world. Payment by Visa, Eurocard, Mastercard. E-mail: airmagazine@wanadoo.fr.

#27 Aout/Septembre/Mars 2005 (64 pages)
 "Courier de lecteur" 2 pages with 8 photos of the Me
 262 in a Czech museum. "Le Loire 501" 17 pages

including 34 photos, 2 pages of scale multi-view drawings, 4 color side-view drawings, and a color 2-view drawing. "Le Catalina dans l'Ejercito de Aire" 6 pages on the Spanish PBY including 10 photos and 3 color side-view drawings. "Deux avions exotiques en Tchecoslovaque" 5 pages including 9 photos [Fokker D.VII (6) & Gotha CL VII (3)] and a color multi-view drawings of the Gotha "Olena" in Ukrainian markings. "Les avions de Blake & Mortimer" 6 pages including 8 photos of models based on the comic book series. "Piaggio P.108" 8 pages on the Italian strategic bomber including 10 photos, a 2-page cutaway drawing, and 2 color side-view drawings (one in USAAF markings). "Maquette: Piaggio P.108B Serie I" 2 pages with 7 photos of the completed model. "Actualite Maquettes & Livres" 4 pages of reviews of kits (22) & books (9) including color photos of box top or cover. [Ed: #25 and #26 were not received for review.]

#28 Octobre/Novembre 2005 (64 pages) "Jeux troubles en mer de Chine" 11 pages on the US intelligence plane that collided with a Chinese fighter and landed on Hainan Island including 30 photos and 2 color side-view drawings (J-7 & EP-3E). "Messerschmitt 108T" 19 pages including 25 photos, 2 pages of 1/72-scale multi-view drawings, 14 color side-view drawings, and three color 2-view drawings. "Les Caudron Goeland Espagnols" 8 pages including 15 photos, 5 color side-view drawings, and one color 3-view drawing. "Les Alouettes de Kazanlik" 17 pages on the aircraft of the Caproni-Bulgarian factory including 33 photos, 8 color side-view drawings (with aircraft carrying civil registration, the pre-war coat-of-arms insignia, the wartime black cross, the short-lived postwar roundel with green bar, or the Bulgarian red star), and five scale 3-view drawings (KB-1 Peperuda, KB-2UT/A, KB-4 Chuchuliga-II, KB-5 Chuchuliga III). "Actualite Maquettes & Livres" 4 pages of reviews of kits (10) & books (18) including color photos of box top or cover.

AVIONS: Toute l'Aéronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 50 euro for 6 issues).

#148 Novembre Décembre 2005 (72 pages)
 "Morane 406 contre Messerschmitt 110" 17 pages including 30 photos, color cover painting, 8 color side-view drawings (MS.406), and a color 3-view drawings (Me 110). "Le veritable PZL.50 Jastrzab" 1 pages including one photo and a 3-view drawing. "Operation 'Etappenhase'" 8 pages including 17 photos. "Le Dornier Do D" 10 pages on the floatplane in Yugoslav service including 20 photos, 4 color side-view drawings, and 3 pages of multi-view scale drawings. "Pionniers – 1910: les biplans bicurve' de Sloan" one page with 2 photos and a small 3-view drawing. "Album Photo: deux annes a l'Escadrille 58" 9 pages including 24 photos, 4 color side-view drawings [SM.1 (2) & AR.1 (2)], and a color 2-view drawing (Salmson 2.A2). "PBN et PBY: les derniers Catalina sovietiques" 8 pages including 10 photos and 6 color side-view drawings. "Wilhelm Frankl" 8 pages including 8 photo (none of aircraft). "Un pilote, un avion: Sadaaki Akamatsi et le Mitsubishi A6M5 Zero" 4 pages including 7 photos of the completed model.

FLIEGER REVUE EXTRA (Verlag Fliegerrevue, Herrn Detlef Billig, Oranienbamm 48, D-13469 Berlin. 4 issues per year, \$66 surface. Payment by check drawn on German bank)

#10 (132 pages) De deutsche Bordflieger Teil I –Der Beginn” 26 pages including 50 photos of German

ship-borne aircraft and their mother ships from the beginning of heavier-than-air flight to the end of WWI; also included are color side-view drawings of four of the ships and of the famous Friedrichschafen FF-33 'Wolfchen'. "Die Interflug Teil 3 – Das Jetzeitalter" 18 pages including 48 photos and four color side-view drawings (Tu-134 & Il-62). "50 Jahre Bundeswehr – Die Starfighter Story" 32 pages including 50 photos and three color multi-view drawings. "MiniCOINs uber Biafra" 16 pages including 28 photos (Nigerian MiG-17, L-29, & Il-28 and Biafran B-26, MFI-9 & AT-6, 3 maps, two color side-view drawings (Biafran B-26 and Nigerian L-29), and color 3-view drawing of Biafran MFI-9. "Sloweniens Luftstreitkräfte von 1918 bis heute" 16 pages including 34 photos (Albatross D.III, Phoenix D.I, Berg D.I, Yak-3, Spitfire, Soko 522, Aero 3, Soko J-20, Mi-8, Gazelle, PC-9, Bell 206, UTVA 75, L-410, Bell 412, Cougar, Zlin 242, & PC-6), one color multi-view drawings (Pilatus PC-9), and 14 color side-view drawings (Berg D.I, Phoenix C.I, UFAG C.I, Albatross D.III, Augusta A.109, Bell 412 (4), Cougar, Pilatus PC-9 (4)).

MITTEILUNGEN (IPMS Germany, Bergengruenstrass 5-7, D-1000 Berlin 38; 12 issues DM 60.00 Europe, DM 65.00 USA, DM 70.00 Japan, DM 75.00 Australia).

3/2005 (44 pages) 'Nothing of small-air-force interest.

ITALY

JP-4 Mensile di Aeronautica (JP-4, Via XX Settembre 60, 50129 Firenze; L 27.000 Europe, L 30.000 elsewhere).

#9 Settembre 2005 (100 pages) Color photos: Greek F-16 '601' and Iraqi C-130B 'YI-301'. "Esercitazione 'Garuda II'" one page with 6 photos of Indian AF Su-30 and IL-78. "Addio G.222" 4 pages including 9 photos. "Panoramica dalla Polonia" 2 pages with 8 photos (Su-22, Mig-29, MiG-21UTI, C-130, & TS-1). "L'Aeronautica Militare Sloveka" 2 pages with 7 photos (Pilatus PC-9, LET 410, AS Gazelle, Agusta-Bell AB 412, Pilatus PC-6, Zlin 242, AS 532 Cougar). "Skyhawk a Rio de Janeiro" 4 pages with 7 photos. "L'Avion di Clement Ader" 4 pages including 8 photos. "Incidenti Militari" one page with 4 photos (Brazilian Navy Jet Ranger 1H-6B '5046'; Argentine A-4AR Skyhawk; and Colombian UH-1H Huey 1EJC-404; & UH-60 Blackhawk 'FAC-4-132'.

NETHERLANDS

MODELBOUW IN PLASTIC (IPMS-Nederland, c/o Rene Euhart, Bernadottestraat 133, NL-2131 SP Hoofddorp. Web site: erhart@quicknet.nl).

3/2005 (28 pages) "Turning a Sow's Ear into a Silk Purse" 7 pages on building the 1/72-scale Revell/Matchbox Fiat CR.42 including 11 photos of the model and 2 pages of 1/72-scale multi-view drawings. "Havoc" 4 pages on building the 1/48-scale AMT/Italeri A-20J including 7 photos. Three pages of 1/32-scale drawings (F-15 LAU-128 Launcher & Fuel Tank and F-16 LAU-129 Launcher).

POLAND

LOTNICTWO (Krzysztof Zalewski, ul Grochowska 306/310, pok. 206, 03-840 Warszawa. E-mail: kz@magnum-x.pl).

7/05 Lipiec (64 pages) "Le Bourget 2005" 5 pages including 19 photos (including Polish AF CASA C-295). "Dassault Aviation Rafale (cz.I)" 6 pages including 11 photos. "Wojna etiopsko-erytrejska w powietrzu (cz.II)" 5 pages including 6 photos (Ethiopian MiG-21, Su-27, Mi17, Mi-35, & MiG-23) and 3 color side-view drawings (Ethiopian MiG-29 and Eritrean MiG-29 & Su-27). "Samolot szkolno-treningowy TS-8 Bies" 8 pages including 25 photos (one of a Bies in Indonesian AF markings). "Samoloty dla polskiego lotnictwa mysliwskiego w latach 1926-1939 (cz.II)" 6 pages including 6 photos (PZL-7 & PWS-10), and 2 color side-view drawings (PZL-8/I & PZL-8/II). "Supermarine Spitfire PR.XIX (cz.II)" 3 pages including 9 photos (Turkey, Thailand, & Sweden). "Naddzwiekowe mysliwce Alexandra Lippischa?" 3 pages including 6 photos and a small 3-view drawing.

8/05 Sierpień (64 pages. Color photos: Iraqi C-130E & Pakistani F-16. "Dassault Aviation Rafale (cz.II)" 8 pages including 12 photos and a one-page color 3-view scale drawings. "Strategiczne bombardowania Japonii – nuklearny atak no Hiroszime i Nagasaki" 4 pages including 9 photos and 2 color side-view drawings ("Enola Gay" and "Bock's Car"). "Operacja Hikari – niedoszły japonski odwet" 4 pages including 7 photos of Japanese submarine aircraft. "Junkers 88G w walce" 7 pages including 11 photos. "Samoloty dla polskiego lotnictwa mysliwskiego w latach 1926-1939 (cz.III)" 7 pages including 11 photos (one each of the PZL-6/-11/-24, but the rest of non-Polish civil aircraft of the era. [Ed: My Polish is not good enough to figure out what is going on.] "Encyklopedia Lotnicza" 2 pages, one each for the Fokker D.21 and D.23 with 2 photos of each.

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$42.00 USA or \$47.00 overseas).

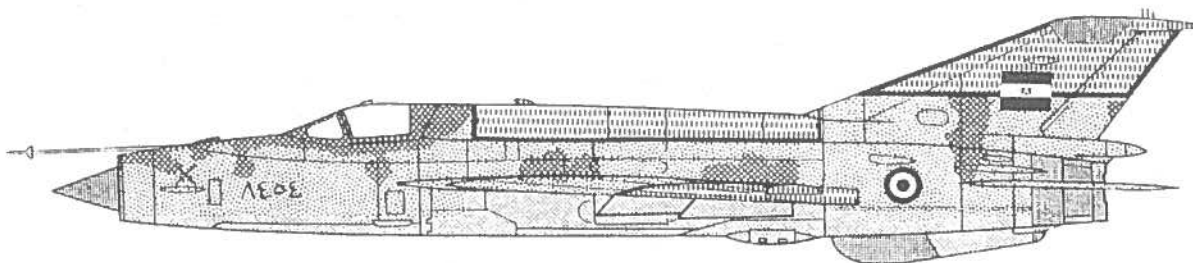
#190 Nov 2005 (146 pages) "The Wright Patent, the manufacturers' Aircraft Association, and American Aviation Between the Wars" 4 pages. "The

Gallaudet Story: Part 12. Re-organization, Move to Rhode Island & the Aviation School" 11 pages including 13 photos. "The Birth of French Naval Aviation" 9 pages including 6 photos. "Earl S. Daugherty" 7 pages including 7 photos. "The Small Breda Pensuti Triplanes" 6 pages including 12 photos and a small 3-view drawing. "Museums/Organizations" 14 pages including 28 photos and a 3-view drawing of the Curtiss America. "Aircraft" 6 pages with 19 photos. "The Rhonie Aviation Fresco" 8 pages including 7 photos. "Pilot's Reports" 7 pages on flying the 1903 Wright Flyer replica and the Sopwith Dolphin including one photo. "Times Tarmac" 4 pages. "An Alternate View of the Markings of the Fokker V.4/F.1 Triplanes" 3 pages including two 3-view drawings. "Drawings" 4 pages including a 3-view drawing of the Standard E-1. "Models" 10 pages including 48 photos. "Letters" 8 pages including 3 photos. "Publications" 12 pages including 7 photos.

SKYWAYS (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$42.00 USA or \$47.00 overseas.).

#76 Oct. 2005 (84 pages) "The Franklin Glider Story" 15 pages including 13 photos (unfortunately none in USN markings) and 4 pages of multi-view scale drawings (Texico Eaglet & PS-2). [Ed: Three 1/72-scale kits of the PS-2 are available from Czech Masters Resin (CMR) with decals for the Texico Eaglet, a USN PS-2, and the award-winning G451Y. See Mushroom Model Magazine 9/4 for a comprehensive review of these kits.] "The Stinson Model A Trimotor Airliner (Part 2)" 11 pages including 7 photos and 4 pages of drawings of the trimotor in the markings of Delta Air Lines, Central Airlines, and Maquette Airlines (including the twin-engine conversion). "Loening C4C/Keystone K-85 Air Yacht" 7 pages including 18 photos (12 of C4C in Chilean military markings) and a small 3-view drawing. "Models" 2 pages including 3 photos. "Oshkosh Air Venture 2005" 15 pages with 30 photos, "Cockpits: Grumman XF2F-1 Navy Fighter" one page including 2 photos. "Aviation Movie Publicity Stills" 2 pages with 4 photos. "ID UNK (Identification Unknown)" 3 pages with 9 photos. "From the Members" 4 pages including 3 pages of scale drawings of the MIMMO Sport Biplane. "Racing the Laird-Turner Meteor Around the Beltway at Night" 3 pages on moving the Meteor from the Smithsonian's Paul E. Garber Facility to the new Udvar-Hazy Center including 8 photos. "Skyways Reviews" 3 pages of reviews of books, magazines, catalogs, & calendars.

Here is an example of a model you can use the Arab serial number from the new Delta Decals reviewed on page 106. Egyptian MiG-21MF '8434' The upper surfaces camouflaged Medium Green on Sand. Undersurfaces are Light Blue. The high-visibility panels and the spine, tail, and wings are probably Orange (FS22510). A multi-view drawing of this aircraft appeared in SAFO #58 (April 1991).



Italian Seaplanes in Spain

Tullio Marcon with Angelo Emiliani

[Editor's note: This article and its English translation first appeared in Aero Fan April-June 2005. It is reprinted here with the permission of Giorgio Apostolo, the editor of Aero Fan.]

Following the first flight of a Curtiss "Jenny" at Los Alcázares on 15.12.1915, Spanish seaplane activity began to use the products of the Italian aviation industry. Initially employed were a few Macchi 7 and 9, used mainly in the training of the pilots of the *Aviacion Militar*, the equivalent of what in other countries would be the Army Aviation service. Later, with the onset of the twenties, the requirement was for aircraft with more crew and higher performance, and the choice fell on the reliable and, - for the time - innovative SIAI biplanes, and in particular the S.16, which, demonstrated at the Paris Aeronautical Salon in 1919 in a civilian transport version, quickly gained a succession of orders within the European arena.

Meanwhile, in summer 1920 an initial example of a military version with a 300 hp Hispano Suiza engine flew to Spain, followed by another 15 in the winter on 1921/22. Moreover, Spain acquired a license from SIAI to construct the aircraft at Barcelona, in the arsenal of the Naval Aviation School. An order for ten machines was issued in 1921. Although formed in 1917, the *Aeronáutica Naval* had yet to equip itself with any aircraft. It also turned to Macchi, acquiring during April 1922 ten M.18 with 190 hp Isotta Fraschini engines. With these it was able to commence training, entrusted to the guidance of an Italian pilot, *Tenente di Vascello* U. Longo.

Meanwhile, Spain was engaged in the repression of a revolt in Morocco, attempting to reoccupy the territory of the Rif lost to the rebels in July 1921. To succeed, they required the support of the developing air arm. Therefore, on 15.3.1922 four S.16 were transferred from Los Alcázares to Nador on the Moroccan coast. One of these seaplanes, piloted by Captain R. Franco, completed the 342 km flight nonstop, thereby establishing the first Spanish record for distance flown in a seaplane. Beginning 22 March, these aircraft commenced operations in support of the infantry, with bombing and machinegun attacks, opening up paths for the troops or relieving them from encirclement by the rebels. In this way, the notion, then in vogue, that seaplanes were only useful if employed in a marine environment, was proved false.

Soon after, the M.18 were also sent to Morocco, arriving as deck cargo on the aircraft transport ship *Dedalo*, which would serve as their support vessel during the operations. However, the operation of these aircraft proved to be laborious, which impaired their efficiency. The S.16, on the contrary, were supported by ground infrastructure allowing the operating base to change in accordance with requirements along the entire coast between Nadar and Conta. At one of these locations, El Atalayón on the Mar Chica, an accident was recorded on 23.4.1922 to an S.16, which cost the life of *Tenente* J. Calderon, the first casualty of Spanish maritime aviation. On 20.6.1923 an M.18 crashed in poor visibility into a mountain at Mahón (Minorca) causing the death of Midshipman V. Cervera and NCO J.S. Tangil.

In December 1922 Spain received its first Dornier Wal; an all-metal oceangoing twin with better performance than the SIAI. However, the excellent results demonstrated by the *Biciclete* [as they were jokingly called] induced the *Aeronáutica Naval* to order nine license-built S.16bis,

deliveries of which commenced in May 1924. Within the year, six of these had been transferred on the *Dedalo* to Morocco, deploying to El Atalayón to operate alongside the aircraft of the *Aviacion Militar*. On 1.10.1924, Midshipman M. Vara was killed by rebel fire.

Characterized by periods of activity interspersed with periods of calm, the operations in Morocco were concluded in 1927. Valuable experience was gained in the operations of the SIAI, assisted by the Dornier Wals in undertaking personnel transport, which could only be conducted by the German aircraft due to its larger size. Thus, the exhibition staged at Barcelona in March 1929 showing the most recent product of SIAI, the S.62, was followed with keen interest. The *Aeronáutica Naval* was so impressed that it decided to order an example without an engine with the intent of constructing the model under license - as per its predecessor - at the city's arsenal, and fitting them with a 600 hp Hispano Suiza, 100 hp more than delivered by the I. E. Asso.

The first of the 24 machines ordered, registered M-NSHA, flew in September, followed at intervals by the others. By September 1932, production had only reached the seventh example. This did not prevent the placing of an order, in June 1933, for a further eleven aircraft, the intention being to create three reconnaissance flights each with six aircraft and three reserves, all based at San Javier (Cartagena). The remaining aircraft were destined for the training flight. Thus, by the middle of the thirties, the SIAI and Macchi types formed the backbone of Spanish marine aviation operations. Of the 26 Wals present, only some 10 were in use, the remainder being at the factory with problems with the propeller reduction gear manufactured by Elizalde in Barcelona.

The situation had not changed when on 19 July 1936 the military uprising broke out. Starting from Melilla (Morocco), the insurrection quickly extended to metropolitan Spain, exploding into all out civil war. Of the 55 seaplanes available at the time, 32 were in fact of Italian design. In the 32 months of vicious fighting that followed, this percentage of Italian seaplanes would be reduced. However, these planes and new machines arriving from Italy would perform a crucial role in the front-line maritime operations (blockading of ports, landing of troops, prevention of arms trafficking, anti-submarine patrols etc) which were well suited to seaplanes. Since as some of these seaplanes were employed by both parties, there would be occasions when one seaplane came up against another, thus forming the rarest cases in the history of Italian airplanes.

In describing the use of the Italian seaplanes in the course of the Civil War (19.7.1936 - 1.4.1939), we will follow the chronological order of their entry into service in Spain prior to and during the operations. The terms "Republican" and "Nationalist" will be used to indicate aircraft operating respectively for the Government in Madrid and for the forces of General Franco.

Macchi M.18

At the beginning of hostilities, all ten surviving M.18 were

concentrated at Barcelona with the *Escuela de la Aeronáutica Naval*. All would serve the Republican cause. By now obsolescent and under armed with only a single Vickers in the bow turret and able to carry only four small bombs, they could only serve as a symbolic presence in the operations. In fact, in the clashes that quickly broke out in the city, their activity was limited to circling above the combatants on 19 and 20 July, with the intention of boosting morale.

With the island of Majorca falling into Nationalist hands early in the conflict, Madrid planned to launch an invasion using militia supported from neighboring Minorca that had remained faithful to the Republican cause. To this end, a sailing ship carrying troops left Barcelona on 5 August, for Mahòn, Minorca. Escort was entrusted to an M.18. Six days previously, a pair of M.18 had flown over Palma, Majorca, dropping propaganda leaflets and opposition newspapers. Later, on August 16, the Republicans made a landing at Porto Cristo, Majorca, creating a bridgehead. Three M.18 were deployed nearby, without nevertheless having any impact on the operations. The Republican attempt to take Majorca having failed, their stay ended with a return to Barcelona on 1 September,

By October 1936, the serviceable M.18 had reduced to only three, and these continued for a few months. When, on 16.5.1937, Madrid formed the *Escuadrilla of Grupo 73* for seaplanes, only two M.18 remained, serialised HM-001 and -002. They were only utilized for occasional training flights. Finally, in the spring of 1938 the aircraft were retired.

Savoia S.62

The loss of three machines, two of which with casualties (16.11.1931 and 26.6.1933) had reduced to 33 the number of S.62 in use at the outbreak of the war. The largest number were at San Javier, with 18 aircraft assigned to the 1^a and 2^a *Escuadrilla de Reconocimiento*; a further five were at Barcelona, four at Mahòn, one (unserviceable) at Palma, and five at Marin, in Galicia, on the Atlantic coast. The latter quickly passed into Nationalist hands, while the others remained faithful to Madrid.

The reorganization of the *Aeronáutica Naval*, resulted in the immediately transfer of five aircraft from San Javier to Malaga, and the others to Barcelona.

Northern Front - The first role assigned to the S.62 contingent in Barcelona was to bomb and machine-gun the rebels in the city. They later operated over the Aragon countryside including raids on the city of Zaragoza. These actions, however, flown between 19 and 30 July, delivered modest results due to operating at too high an altitude, the fear of being intercepted by Nationalist fighters, and the meager offensive capability, comprising only 12 kg bombs.

Southern Front - The section detached to Malaga to operate over the Alboran Sea between Spain and Morocco entered into action on July 25 with two aircraft attacking Nationalist troops landing at Algeiras. Return fire caused the loss of one of the S.62 with the loss of the crew, while the second seaplane returned to base with damage sufficient to put the aircraft out of action. Two days later, another two aircraft returned to Algeiras where they destroyed two Nationalist Wals anchored in the bay. However, the crew of the Wals returned fire, causing one of the attackers to ditch in the British sector, where it was interned, although the crew were released. After this unfavorable beginning, the detachment at Malaga, down to three aircraft, was mainly inactive until its transfer to Almeri.

Balearic Front - The Republican aircraft based at Barcelona

and Mahòn, Minorca, were engaged from the 23 July onwards in bombing raids on the islands of Majorca and Ibiza, which were under Nationalist control. These systematic raids, which continued until 5 August, were met with weak reaction from the ground, which damaged only one aircraft, as the Nationalists were without any air assets in the theatre.

While the plans to occupy the islands from the sea were in preparation, on 6 August six aircraft were transferred from Barcelona to Valenza. On the following day, they provided top cover for the landing at Formentera, a small island south of Ibiza. The landing was not opposed, allowing the aircraft to be provisionally stationed in an inlet on the island. From there they took off on 8 August for Ibiza, where a landing of Republican forces from the destroyer *Almirante Miranda* was imminent. The presence of the aircraft effected the morale of the defenders, who surrendered the following day. Returning to Barcelona, the seaplanes were prepared to support the final operation, namely the conquest of Majorca. This appeared a certainty, at least on paper, given the strength of the contingent carried by twelve steamers and four motor yachts, escorted by dozens of naval units, amongst which were the battleship *Jaime I* and the cruiser *Libertad*. The landing was completed without difficulty on the 16th, at Porto Cristo, Majorca, and eight S.62 were soon relocated to a nearby inlet (along with three M.18). The Savoias collaborated in the attempt to overcome Nationalist resistance, which nevertheless managed to frustrate their enemy's plans, despite the overwhelming Republican strength. On 4 September the Republicans re-embarked, canceling the campaign. Of the eight Savoia, only one was saved. Of the rest, one was destroyed by a shell, two machine-gunned at anchor by Italian fighters that had just arrived in Majorca; four abandoned on the island (two of which were by then unusable). Of note was the escape from Malor, on 30 July, of the Nationalist S.62 which was present at the beginning of hostilities, and which managed to reach Mahòn. Later, on 22 August, it crashed while returning from a mission over Porto Cristo.

Atlantic Front - The 3rd *Escuadrilla de Reconocimiento* which was located at Marin on the Atlantic coast, and which quickly sided with the Nationalists, supported their actions on 19 July with various attacks on the arsenals at El Ferrol, Vigo and Tuy, although these localities did not fall into their hands, unlike the rest of Galicia. At this point, it was considered unproductive to send thee of the five aircraft to the south, where the Nationalists possessed only two Wal. Meanwhile, on 27 July they transferred to Cadiz, with occasional deployments to Ceuta, in the Straits of Gibraltar. Here, on 9 August one of these overturned on take-off and was destroyed, fortunately without causing any casualties. In September, the other two were unserviceable due to a lack of spare parts. An identical situation afflicted the pair that remained at Marin. Nevertheless, the enthusiastic efforts of the Commander, L. Brage Gonzales, enabled one to be returned to flying condition to operate in the Asturias area, also using as a base the estuary of the river Ribadeo. There were also highly productive antisubmarine patrols of the Cantabrian Sea, and patrols to monitor the movements of the Republican naval fleet (this had in fact been spotted on 28 September at sea off Cape Ortegal, outbound from the Mediterranean with the intention of briefly "showing the flag" in the Bay of Biscay). On 10 October the fleet was again located during its return south. Eventually, even this one seaplane began to show its age, and had to be grounded, and the efforts to replace it with another proved fruitless.

In the same period there were other S.62 in flight over the Cantabrian Sea. These were the four Republican machines which, once the expedition to Majorca had failed, left the base at Barcelona on 30 September for Santander. From there, and from Bilbao, they began to perform reconnaissance missions up to 15 miles from the coast, aimed at monitoring possible movements of Nationalist shipping, above all submarines. When the Republican fleet ended - as already reported - its foray into those waters, one of the four aircraft was embarked on the battleship *Jaime I* with the intention of patrolling the sector of the Straits of Gibraltar, where the presence of two Nationalist cruisers was expected. With the arrival of the fleet at Cartagena on the 16th, the seaplane was disembarked and, probably, went to Barcelona.

Subsequent events - Just a few months after the beginning of the war, the activities of the S.62 with both parties was reducing, as no support for the type of aircraft had been planned, and the fleet was seriously affected by a shortage of spare parts. In November 1936 the largest detachment was that based at Barcelona, where the ten Republican aircraft were involved in the patrolling of coastal waters; one of these was shot down by Nationalist fighters on 1 December, while another two on the 20th failed to spot the cruiser *Canarias* which sent the Soviet merchant ship *Komsomol*, full of supplies for the militias, to the bottom. At the end of the year, another aircraft force landed on the sea, the crew being rescued after twelve hours, but the aircraft was lost. In January 1937, the availability of the fleet had reduced to six aircraft. One had crashed on landing on 11 May. With a decree of the following 16th, the *Aeronáutica Naval* was disbanded and replaced by the *Fuerzas Aéreas de la República Española*; with the six S.62 available (and three M.18). The 1ª *Escuadrilla of Grupo 73* was immediately constituted. The role assigned was that of escorting merchant ships that, using Marseilles, were bring supplies to the Republicans, unloading them at Barcelona. On 15 July, a Savoia was shot down by the *Canarias*, that rescued its crew; a few weeks later, another was written off after an accident. In the spring of 1938, only four remained on charge, serialised HS-001/004, now concentrated at San Javier. Here, on 24 November, 003 crashed on landing, and was unrepairable. The other three, now unserviceable, were retired within the year.

The unit deployed to Santander, this also Republican, had a very short life. In fact, of the four aircraft present at the start of 1937, one was destroyed while landing at Bilbao, with victims, on the 25 March. After a couple of weeks, a second was shot down in error by the destroyer *C.T. José Luis Díez*. A third was out of use by the end of April, while the last example was destroyed by the Republican personnel before the Nationalists captured Bilbao on 26th August.

As for the Savoias in Nationalist hands, in 1937 there were a pair in Morocco, accompanying the Wal in *Grupo I-G-70*. Their serviceability state was increasing precarious, and eventually, in January 1938, they were retired.

On Majorca, at the Pollensa base, it was found to be possible to return to serviceability one of the two aircraft captured from the Republicans when they abandoned the island. Assigned to *Grupo 2-G-62* with the code 61-5, this final S.62 returned to flying on 3.10.1937, performing a maritime reconnaissance mission. However, on 11.2.1938 a storm struck Pollensa, destroying the aircraft on the ground.

Thus was concluded the story of these seaplanes which, together with the Dornier Wal; were the only to serve with both belligerents in the course of the Civil War.

Savoia S.55

The possibility of losing Majorca, given the overwhelming number of Republican troops landed at Porto Cristo on 16.8.1936, induced the Nationalists to request Italy to send aircraft, of which the island possessed none at all. At Orbetello, Italy, base of the S.55X that had returned from the "*Crociera del Decennale*" and now converted to the bomber role, some three aircraft were selected, and with crews from the *R. Aeronáutica*, full bomb load and without any identification markings, they flew in haste to Pollensa, Majorca, arriving at midday on 18 July. Following a briefing, this, they took off and at an altitude of 400 meters dropped bombs on the Republican fleet in the waters off Porto Cristo. No bomb found its target, and there was no response from the ships, which were not expecting to see Nationalist aircraft in the area. On the following day, using *ad hoc* munitions, given that there were no bombs on the island, the attack was repeated, with a similar negative result, although the effect on the morale of the Republicans was significant.

The Republicans prepared an immediate response, calling up seven S.62 which at mid-day on the 20th attacked Palma and the three S.55 with bombs and machine guns, damaging one and rendering it out of service. While the other two S.55 returned to Orbetello on the following day to avoid the danger of destruction, the damaged seaplane (the former I-LONG) was the object of local attempts to repair it: In early September this work was completed and the aircraft, now assigned to the 130ª *squadriglia legionaria*, was ready for operations. The crew was always Italian, but they used fictitious names, and were integrated with a couple of Spanish officer aircrew.

On 10 September, with *Tenente S. Pietralli "Petaselli"* at the controls, it flew its first reconnaissance mission: A couple of days later, it flew to Ibiza, where its effective bombing raid convinced the Republicans to rapidly evacuate their forces from that island and the island of Formentera. Unfortunately, returning on 28 September from a patrol of the waters around Minorca, the aircraft made a hard landing, causing one of its two hulls to be holed. Its fate was sealed on 26.5.1937, following an attack by five "Katiuska".

Macchi M.41

At Majorca, the Nationalists also had a requirement to defend themselves against attacks from Republican seaplanes, located across the island at Porto Cristo. Therefore, the merchant ship *Emelio Morandi* left Italy, with a cargo of three CR.32, three M.41bis, gun and bomb ammunition, aviation petrol and 20 mm anti-aircraft artillery. The accompanying personnel of the *R. Aeronáutica* were in civilian clothes, with fictitious identities. The black-painted ship carried neither name nor homeport. Once close to the island of Majorca, it simulated a technical fault and was towed to Palma on the night of 28 August 1936 by the destroyer *Lorenzo Malocelo*, which was already operating in the area. The cargo was rapidly unloaded, and the aircraft assembled, the Macchi on the dockside, while the Fiats were taken by road to the airfield at Son San Juan.

By the late morning of the 28th, one of the first seaplane fighters was ready for flight. Its pilot was the flight leader *Tenente C. Rinaldi "Rovello"* who, after some circuits over Palma headed for Porto Cristo, easily identifiable due to the many ships located off shore. In a nearby canal, Rinaldi spotted six seaplanes that had been strafed just before by one of the Fiats that had also been hastily assembled. Having attacking and

worsening the damage, he dropped incendiaries on the ground troops and returned undamaged to Palma. Subsequently, two pairs of Macchi and Fiat intercepted an S.62 flying towards Mahón and forced it to land on the open sea with dead and injured aboard. This aircraft was later recovered and towed to its destination by the vessel *Mar Negro*.

The three seaplane fighters established their base in Palma at the facilities once occupied by the *Campaña Transmediterránea*. They took on some local personnel to assist in the maintenance tasks.

From the end of August until the re-embarkation of the Republicans at Porto Cristo, the Nationalist Macchi M.41 performed several attacks on the bridgehead at Porto Cristo, and on some occasions came up against Republican S.62 and M.18. The one drawback was the superior speed of their opponents, which allowed them to escape from pursuit. On 30 August, an M.41 spotted the Republican submarine B.4 on the surface and heading for Palma. The attack on the boat, pressed home despite the anti-aircraft fire, forced the submarine to submerge to avoid the menace.

Once it was evident that the Republicans had abandoned their plans to occupy the Balearics, the three Macchi, still assigned to the *130ª escuadrilla legionaria*, were transferred to Pollensa to be better able to monitor Minorca, the only island remaining in Republican control. Their activity gradually diminished, both from a lack of targets, and also from a shortage of spares, which despite requests to Italy, did not materialize. Eventually, in May 1937 they ceased flying operations, being definitely retired in late 1938.

CANT Z. 501

Purchased thanks to an appeal launched by the Aeroclub of Cadiz, which passed the money to the local Nationalists insurgents from the *Aeronáutica Naval*, the first "501" arrived there in mid-September 1936. Baptized "Cadiz"; it quickly was assigned to the unit which, in Morocco, operated the Wal, but also had a short life. In fact, during an afternoon reconnaissance patrol flown on 22 September, searching for the Republican fleet that had left the Straits of Gibraltar and was bound for the Cantabrian Sea, it flew into the sea and was destroyed. A French ship rescued the crew.

Although in the autumn the Heinkel 59 and 60 seaplanes of the Condor Legion began to arrive in Spain in support of the Nationalists, their numbers were never sufficient to completely monitor the routes used to bring aid to the Republicans from France and the Soviet Union. Therefore, the Italian *Comando dell'Aviazione Legionaria* agreed to the deployment of three "501" to Palma, Majorca, to monitor the traffic between Marseilles and Barcelona. The three aircraft arrived by sea in early December, but operated only briefly under Italian command, their management being claimed by the Spaniards who transferred them to Pollensa, Majorca, using them to constitute 2-G-62 in January 1937.

The operational debut was unfortunate, as on 1 February 62-1 while taking off struck the mast of a vessel and plunged into the sea. Of the crew, two were killed and two injured. The other two aircraft commenced patrols of the western Mediterranean, with missions as long as seven hours being flown thanks to the endurance of the "501": There was also the necessity to extend the patrols out to the east, utilizing Sardinia: Elmas, in fact, accommodated 62-2 for some days at the end of February.

Meanwhile, five Spanish crews had gone to Orbetello to

collect a similar number of "501"; numbered from 62-4 to 8. In mid-March they arrived at Pollensa, becoming fully operational in April, and forming, with 62-2 and 3 the 1ª and 2ª flights. Finally, on 5 November 1937 the unit received its last two aircraft from Italy, which were allocated the serials 62-9 and 10.

The activity of the "501"; above all in the sphere of armed reconnaissance, was very intense and continued until the cessation of hostilities. What follows is a month-by-month description of the most significant events.

March 1937 - A Republican flotilla formed by the cruiser *Libertad* and six destroyers was attacked on the 7th by 62-7 using 50 kg bombs. None struck home, and the aircraft suffered no damage from anti-aircraft artillery.

April 1937 - On the 11th aircraft 62-2 set light to a blockhouse at the port of Cartagena. On the 14th, south of this location, 62-8 bombed the *Libertad* and its escort. The aircraft was badly damaged by anti-aircraft fire, but managed to return to base.

May 1937 - On the 24th, while reconnoitering the airfield at Alicante at low level, 62-4 was attacked by five I-15 "Chato" fighters, which declined, however, to follow it out to sea.

June 1937 - The Republican merchant ship *Mar Blanco* was spotted in Algerian waters on the 15th by 62-5; the bombers from Son San Juan, called into action, forced the ship to run for Oran.

July 1937 - The *Grupo* suffered its second loss on the 3rd, when 62-7, taking off after an overhaul, stalled and crashed the death of the pilot and an engine technician. Five other men suffered light injuries, three of whom were mechanics who, keen to experience a flight, had hidden in the prow of the hull, thereby adding to the weight of the aircraft and dangerously disturbing its center of gravity. On the 5th, 62-5 spotted two destroyers and two submarines escorting a merchant ship bound for Mahón; Minorca. Although not carrying bombs, the aircraft simulated repeated attacks on the ships, braking up the flotilla. Later, having strafed two fishing boats in the vicinity, it returned with hits from 20 mm anti-aircraft fire. On the 11th, 62-6 located off Cabrera the Greek tanker *Jonion* that, thanks to the information from the seaplane, was intercepted by the auxiliary cruiser *Antonio Lazaro*, with the seizure of 9,000 tonnes of fuel destined for the Republicans. On the 24th, an unnamed vessel identified near the Columbretes Islands by 62-3, responded to the order to stop by shooting back, forcing the aircraft to bomb it until it burnt. After three days on searching, on the 30th, 62-3 and 62-8 located a He 59 which, with injured aboard, had alighted in the Bay off Terragona following a night action. The discovery enabled the aircraft and crew to be recovered.

August 1937 - On the 1st, while photographing a Republican merchant ship damaged in a Catalan canal, aircraft 62-6 came under fire from a fishing vessel. In reply, the machine gunner strafed it and it caught fire. On the 5th, 62-3 sank two of four Republican vessels patrolling the Alicante coastline: the seaplane escaped the attack of two fighters, airborne from San Jivier, by flying at wave top level. On the same day, and for the five following days, 62-6 was detached to Elmas to control shipping movements from the Black Sea heading for Spain: the outcome was negative. On the 14th, an early report by 62-8 to the cruiser *Canarias* of a submarine heading towards it permitted the ship to change course and avoid being torpedoed.

September 1937 - Aircraft 62-8, flying a patrol on the 5th towards the Catalan coast, was forced to alight at sea due to worsening visibility. Despite the deteriorating conditions, it managed eventually to return to base.

October 1937 - Learning the modern vessel *Cabo Sao Tome* had slipped anchor at Odessa carrying an important cargo for the Republicans, 62-6, detached to Elmas on the 8th, spotted the ship south of Sardinia on the 10th sailing under a false name and flying a British flag. Identified nevertheless, it replied to the order from the seaplane to stop by firing back. The aircraft called up two Nationalist gunboats, which, under its direction, reached the vessel, and after a brief combat, forced it to run aground near Cape Rose on the Algerian coast. On the 12th, despite the heavy anti-aircraft reaction, 62-3 managed to identify a new airfield near Mahón, Minorca.

November 1937 - On the 16th, during an antisubmarine escort of a convoy, 62-4 ran into a fog bank, and was forced to alight on the open sea in the late evening. Its light signals were spotted by the British destroyer *Basilisk* that rescued the crew and secured a line to the aircraft to await the arrival of the Nationalists. They arrived on the 17th, initially in a He 59, then in 62-10, and finally in the destroyer *Velasco Melilla*, which towed the seaplane back to Formentera during the evening.

December 1937 - On the 19th, 62-8 performed a reconnaissance mission over the port of Cartagena, where it discovered some elements of the Republican fleet. Avoiding the anti-aircraft fire, the seaplane was attacked by an I-15, which was driven off, and possibly damaged, by the gunner in the rear turret. The year concluded with the location of a large convoy by 62-8 on the 30th; the aircraft managed to return, despite being attacked by a twin-engined aircraft and three I-15.

January 1938 - Nothing significant to report.

February 1938 - On the 2nd, above Cape la Nao, aircraft 62-3 spotted three unflagged destroyers, recognizing them nevertheless as Republican. While waiting for the bombers they had alerted to arrive, the seaplane machine-gunned the deck of one of the destroyers, and emerged without damage. On the 11th, a particularly heavy dawn raid on Pollensa, Majorca, caught 62-3, 4 and 5 on their trolleys on land, and 62-6 on the crane. The latter, turned upside-down by the attack, suffered the greatest damage; of the four. The other three "501" were damaged although two remained on land while the third was dragged into the sea, but did not sink. For a short time, therefore, the fleet of "501" remained out of service. In compensation, on the 30th, Pollensa finally took delivery of a 30-tonne capable electric crane.

March 1938 - Aircraft 62-3 spotted, on the 19th, a suspect vessel, which revealed itself to be the Greek *Euphorbia*; attacked by three fighters, the seaplane was forced to land at Ibiza, instead of Pollensa.

April 1938 - The "501" began to feel the effects of the heavy operational use that they had undergone, and their serviceability began to reduce.

May 1938 - On the 25th, while flying a reconnaissance mission north of Majorca, aircraft 62-4 suffered a technical fault that forced it to alight. Unfortunately the sea state was so rough that the landing was a failure, and the aircraft was destroyed. Two crewmembers were killed and three injured survivors were rescued by the British cruiser *Sussex*.

June and July 1938 - An attempt was made to reinforce the fleet.

August 1938 - On the 5th, in a patrol lasting 8 hours and 50 minutes over the western Mediterranean, aircraft 62-8 performed the longest mission of the entire war. On the 11th, 62-6 spotted for the second time [the first was on 11.7.37] the Greek tanker *Jonlon*, loaded, and heading for Valenza. The seaplane trailed the

tanker until the arrival of a warship which directed the vessel to Pollensa. On the 20th, aircraft 62-10 was sent to perform low-altitude photography over the artillery positions on the fortress of Minorca. The aircraft returned with serious damage from anti-aircraft fire.

September 1938 - The "501" were gathered into a single flight, as 2^a of Grupo 2-G-62.

October and November 1938 - The now worn-out "501", were proclaimed the "*Ojos de Mallorca*" [Eyes of Mallorca].

December 1938 - On the 12th, during the machine-gunning of an armed launch, 62-10 was badly hit by return fire and was forced to alight at Formentera. At sea off Formentera on the 20th, 62-8 was attacked by an I-15 fighter and was forced to abandon its mission. On the 31st, the Greek merchant ship *Marlonga* was spotted by 62-3, which "invited" it to stop. As the ship did not obey, the seaplane struck it with bombs and machine gun fire, forcing the crew to abandon ship.

January 1939 - Nothing significant to report.

February 1939 - On the 2nd, a motor yacht was located by 62-8 in an inlet near Cape la Nao, and was strafed; the aircraft returned to Formentera to load bombs to finish it off, but on returning to the scene could find no trace of its target. On the 8th, a revolt against the Republicans being underway in Minorca, and with the need to identify which parts of the island were still in Republican hands, 62-8 over-flew the island, drawing anti-aircraft fire. 62-8 again on the 12th spotted in waters off Ibiza the merchant ship *Teresin* which, after being strafed and bombed, decided to enter a creek on the island where it was captured.

March 1939 - When, on the 6th, it was learned that some forts in Cartagena were passing to the Nationalist side, 62-9 was detached to support them. The aircraft was intercepted by three I-15 that forced it to land not far from two Nationalist vessels eight miles off the coast. Because the vessels ignored the seaplane's signals for assistance, the three fighters returned to strafe the aircraft, countered only by the gunner in the dorsal turret. Despite the risk of fire and the state of the sea, the pilot took off and managed to reach Formentera. On the 22nd, 62-3 located a He 59 sinking off the island of El Vedrà. The same 62-3 performed the final war missions consisting of a patrol in the waters off Cape San Antonio, but discovered only Nationalist shipping.

At the cessation of hostilities, the remaining "501" were the five of Grupo 2-E-62: 62-3, 8 and 10 serviceable, and 62-6 and 9 under repair.

CANT Z. 506B

With the war underway, the *Regione Aerea delle Baleari* identified the requirement to finally possess modern multi-engined seaplanes, equipped with endurance, instrumentation and payload that would enable them to operate along the all enemy coast, even at night. Negotiations with Germany, which offered only the Ju 52 in a seaplane version, came to nothing since the Spanish considered it too slow. Thus the Nationalists turned to Italy and, in particular, to CRDA, which was known to have eight Cant Z. 506B available. An agreement was signed covering the purchase of four of these, and in early 1938 a similar number of Nationalist crews arrived at Monfalcone to undergo type familiarization. When their training was completed, three of them flew to Pollensa on the 21 August, routing via Orbetello-Elmas, and the fourth arrived on the following 27th. The "506" formed the 1^a squadriglia of Grupo 62-73, the second being formed by the "501", formerly of 2-G-62.

September 1938 - The first mission, involving 73-1, was

performed on the 9th, in search of three Ca 310 posted as missing on the route Sardinia-Palma di Majorca.

October 1938 - On the 6th, packets of bread were dropped on Alicante for propaganda purposes by 73-2 and 73-4, which, attacked by fighters, both returned with damage. On the 19th, having just bombed Valenza, 73-1 and 73-4 were pursued on the return leg by twelve I-15, which did not, however, attack them. On the 28th, despite poor weather 73-1 and 73-4 took off to bomb Valenza; the first of the pair, flown by *Tenente Colonnello* Ramon Franco Bahamonde, *Jefe de la Region Aerea de Baleares*, crashed at sea with no survivors, while the second, with the absence of its companion, aborted the mission.

November 1938 - Alicante was attacked on the 20th by 73-4, which drove off three I-15 with its dorsal gun.

December 1938 - On the 29th, the merchant ship *Marionga* that was known to be carrying supplies to the Republicans, was intercepted by 73-3, which dropped a bomb ahead of it to force it to stop. The vessel was abandoned by its crew, and subsequently captured by a Nationalist patrol ship.

January 1939 - On the 6th, an armed motor yacht was attacked by 73-4. On the 21st, a convoy was attacked some 30 miles off Barcelona by 73-3 and 73-4; Republican fighters, arriving in response, were driven off by the first of the pair. On the return route, the second had to alight due to a technical

problem with the wind gusting up to 50 knots. The British merchant ship *Mirupanu*, which was close by, some 35 miles off the island of Cabrera, recovered the crew and carried them to its destination, Oran. Aircraft 73-4 was relocated four days later south of Cabrera, semi-submerged; it was towed to Porto Cristo by the auxiliary cruiser *Porto Negro*, but was classified as un-repairable.

February 1939 - On the 8th, the garrison of the fortress at Minorca rose up against the Republicans. On the following day, the Republican authorities attempted to escape to sea in a motor yacht, which was stopped by bombs from aircraft 73-3. The seaplane later entered the port of Mahón, amongst the first Nationalist forces to do so.

March 1939 - Aircraft 73-3, detached along with 73-2 to Elmas, sighted on the 6th the Republican fleet, which from its base at Cartagena was heading for Algeria; the aircraft trailed the ships without attracting any reaction, and later returned to Pollensa. Finally, on the 16th 73-2 located the Republican merchant vessel *Castillo De Olite*, outbound from Cartagena, which finished abandoned on the south coast. While the seaplane was conducting the reconnaissance, it was attacked by two fighters, which it managed to drive off with its machine guns. This was the last mission performed by the "506" during the War in Spain.

Additional notes on Italian seaplanes in Spain

Angelo Emiliani

Rafael de la Guardia y Pascual de Pobil, an officer pilot, has dedicated two large volumes of nearly 1,200 pages to the history of the *Aeronáutica Naval* ("*Crónica de la Aeronéutica Naval española*"; Editora Nacional, Madrid 1977). The seaplanes of Italian origin (designed or constructed) constitute a considerable part of this history, and it is difficult, therefore, to adequately describe their service in an article. Perhaps it is more opportune, if a more meaningful study is required, to examine each individual type independently.

It is worth starting from the very beginning: the first Italian seaplanes in Spain were not those that served with the *Aeronáutica Naval*. In March 1920 an Italian pilot, Guido Janello, performed the first flight between Barcelona and Palma di Majorca in a Savoia S.9, fulfilling an ambition, which the Catalans had been nurturing for some time. Exactly a year later, on 29 March 1921, *Aero Marítima Mallorquina* was constituted at Palma, the agency's first aircraft being a Savoia S.16. Meanwhile, another Italian pilot, a veteran of the Great War, Umberto Guarnieri, had for some months been performing pleasure flights utilizing an S.9. In 1922 *Aero Marítima Mallorquina* acquired three Macchi M.18 and engaged several more staff, amongst which was Alessandro Passaleva and several mechanics. Subsequently other Italian pilots, such as Renato Spada and Giovanni Bosco, would serve at the controls of the company's aircraft.

The policy adopted by the *Aeronáutica Naval* to equip itself with Italian seaplanes involved the acquisition of one or more examples, which would then constitute a basis for the studies for the construction of small batches of them at their own factories (ex Hereter). The contractual clauses included the obligation to communicate to the Italian manufacturers all subsequent modifications performed and their effects on the characteristics and performance. This commenced in 1920 with the purchase of a SIAI S.13. By 1922 six examples of the type had been

constructed in Spain.

In 1921 contract negotiations were under way for the acquisition of construction of ten S.16 and for the purchase of two Macchi M.18 (plus another two in March 1922) without engines, as it had been decided to equip them with two 150 hp Hispano Suiza.

By April 1922 some six M.18 had been ordered from Italy (a significant factor for the commanders of the *Aeronáutica Naval* being that these aircraft were immediately available). The deliveries, by air to Barcelona, occurred in the following month, May. By the end of 1922 the Italian seaplanes serving with the *Aeronáutica Naval* comprised: eight S.13, six S.13bis, four S.16, twelve S.16bis, and ten M.18.

The S.13 and S.16 were nicknamed "*bicycles*": They never gained the complete trust of the Spanish pilots, who considered them difficult to fly. It was subsequently decided to use them until they wore out, without any attempt to prolong their service lives. The situation improved with the construction of the "*bis*" versions of both aircraft (the differences consisted, for the S.13/S.13bis, in the engine starting system, a repositioning of the oil tank, modifications to the fin, and redesign of the floats and fuselage construction; for the S.16/S.16bis, there were four wing attachments instead of two, floats and fin from the S.13bis, and modifications to the accommodation for the pilot and other two crew members.).

The opinions on the M.18, however, were more favorable. This judgment was confirmed by the brief but complicated history of *Aero Marítima Mallorquina*, and which was also explained to me by Enrique Pereira, a pilot of the *Aeronáutica Naval* who I came to know well. I therefore do not understand the expression used by Tullio Marcon when he defines it as "*mas letal*":

Although it is not 100 per cent confirmed, I consider that the Dornier Wal that served with the *Aeronáutica Naval* were of

German construction, while those with the *Aviación Militar* were built at Marina di Pisa.

Marcon does not include a further Italian seaplane, which served with the *Aeronáutica Naval*: the Macchi M.24. Some six examples of the type were purchased, with 400 hp Lorraine Dietrich engines, in spring 1925. The intention was to use them as torpedo bombers, but the tests did not prove successful, and they ended up with bomber units, being involved in modest operational service during the war in Morocco.

It might be of interest to learn that in June 1925 orders were published relating to the identification of the aircraft. The following markings were assigned to the Italian seaplanes: Macchi M.18 of the school (eleven examples) M-NMOA, B, C, G, G, J, K, P, Q, R, S (two Gs, not an error); reconnaissance M.18 (three examples) M-NMHA, B, C; Macchi M.24 bombers (six examples) M-NMLA, B, C, D, E, F; S-16 and S.16bis (nine examples) M-NSDA, C, D, G, H, I; S.13 and S.13bis (nine examples) M-NSTA, C, D, E, F, H, I, J.

In August 1927 an M.18 with folding wings was purchased from Macchi with the intention of using it as a prototype in view of equipping the *Dedalo* with the type.

The first SIAI S.62 was acquired in mid-March 1927, albeit without an engine, and it was intended to install a 600 hp Hispano Suiza 12LB. After the start of production in Spain, the first S.62 entered service in March 1931, with three examples registered M-NSHA (purchased from Sesto Calende), M-NSHB and M-NSHC. Construction of the sixth aircraft was completed in November of the same year.

Small groups of officers came to Italy to gain experience with units already operating the types of aircraft. This continued even after the advent of the Republic in 1931.

In June 1933 the identification markings were changed, with the assignment of a roman numeral preceded by a letter (M for Macchi, S for Savoia, D for Dornier). It seems that on that date there were 16 Savoia and 11 Macchi in service.

Marcon gives that date of 19 July as the beginning of the military uprising of '36. In reality, it commenced on the evening of the 17th in African territory, and spread throughout the metropolitan garrisons on the following day. The official date recognized by the Spanish state is July 18th. The date of 18 July reported in the paragraph referring to the S.55 is also incorrect: the correct date is 18 August.

I will not dwell on the role played by the S.62, but I might be permitted to refer to my work "*Italiani nell'Aviazione repubblicana spagnola*" where I covered this subject in detail,

drawing on direct testimonies and an extensive bibliography.

Much has been spoken and written about the cause of the death of Ramon Franco. His filo-Republican sympathies rendered him an object of hate by the Nationalist officers. When he was appointed as commander of the forces in the Balearics, written protests were dispatched to his brother, Generalissimo Francisco Franco. The possible cause of his death was reported to be the fact that, during flight, it was easy to inadvertently knock the keys to the magnetos, causing an immediate loss of power in the engines.

Finally the Caproni Ca.310: the statement that three were lost on 9 September 1938 has been published many times, but I have never managed to confirm this. On that day three Ca. 135 were lost, with 15 men. It could be that the confusion stems from this, and confirmation of the situation would give me great pleasure.

Photo captions for photos on pages 84-85 & 108-109.

(All photos via Aero Fan)

1. On 27 July 1936, during an attack on Algeciras, S.62 S-12 was intercepted by a Nieuport 52 and was forced to alight in the waters of Gibraltar where it was seized by the British Navy.

2. A Republican M.18 'M-NMOF'.

3. A Nationalist M.41bis fighter is being lowered into the water at Palma (Majorca).

4. This M.41 was photographed at Palma (Majorca) a few days after its arrival from Italy: it does not yet carry any national insignia.

5. The M.41bis of serg. Magg. Rinaldo Damiani patrolling off Majorca in the summer of 1937.

6. Most of the S.62 seaplanes were based at San Javier (with two reconnaissance squadrons); others at Barcelona, Palma and Galizia.

7. A strong wind on 11 February 1938 damaged four Z.501s at Pollensa Bay (Majorca) including '62-6'.

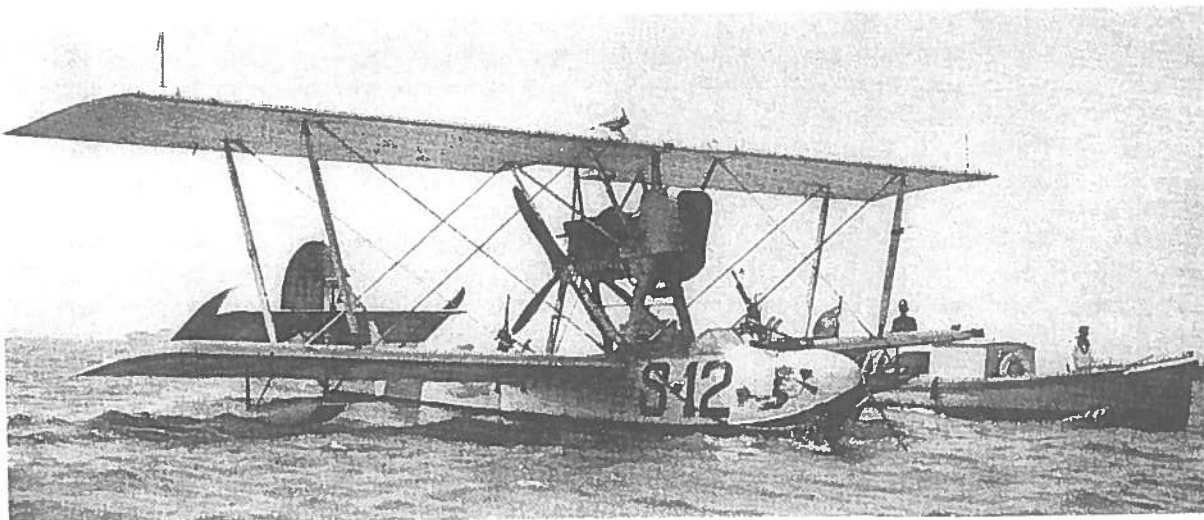
8.. Z.501 '62-9' aircraft in flight.

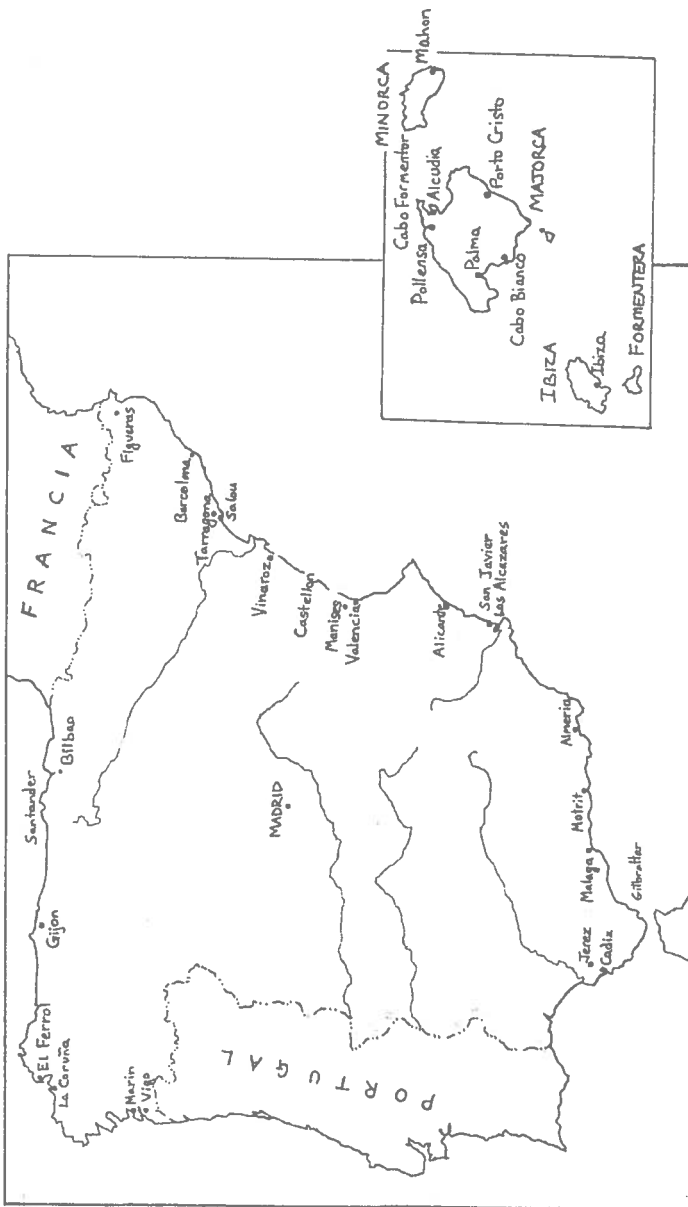
9. Z.501 undergoing maintenance work at Pollensa (Majorca).

10. Z.506Bs were used for reconnaissance missions from September 1938 to March 1939. Shown here in flight is '73-3'.

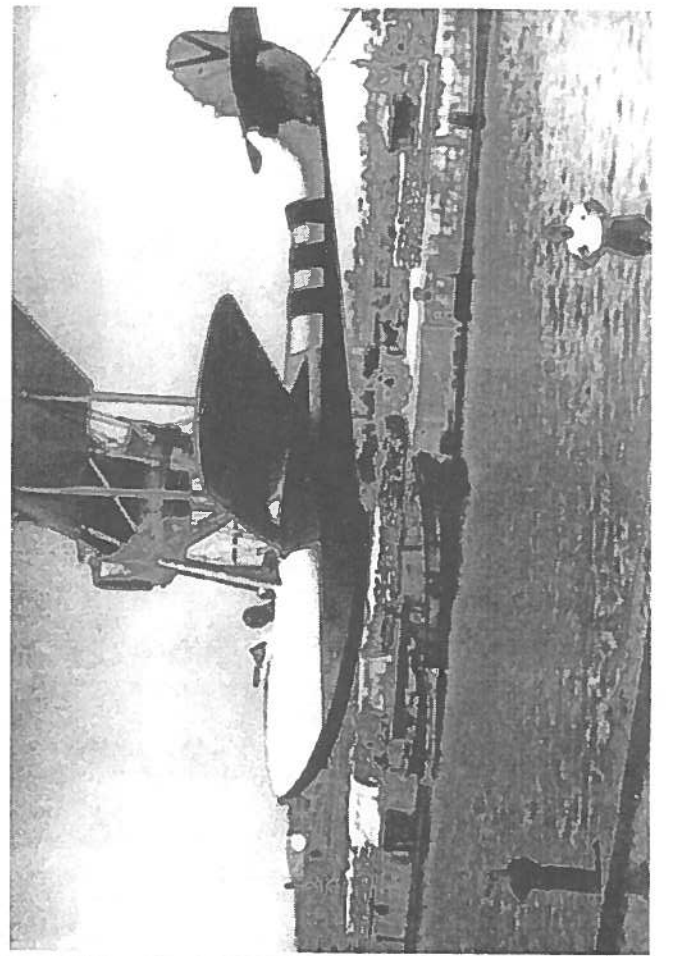
11. Another view of the seaplane base at Pollensa (Majorca) with Z.506Bs (nos. '73-3' and '73-4').

1





2



3

The Dutch Air Arms' Defense Against the German Invasion

Part 4B

The MLD in Meidagen – May 10th – 14th

Doug Dildy and Frans Scheve

The MLD Goes to War

Early on the morning of May 10, the MLD detachment at Alkmaardermeer launched its routine patrol, GVT.1 sending a C.14W, "F-5" piloted by Sgt A. J. Daniëls, with Lt M. R. van Kooij as the observer, up the North Sea coast. With the sun barely breaking the horizon to the east, near Petten Daniëls spotted several fast airplanes approaching. As three of them arced around to point their sharp noses at the droning floatplane, Van Kooij broke out the 7.9-mm Lewis machine gun and the first air battle of the Meidagen was on. The attackers were German Bf 109Es (from II(J)/TrGr 186—the Luftwaffe's carrier air group, organized for a ship never commissioned) and they tried repeatedly to bring their machine guns and cannons to bear on the Dutch biplane.

But the slow float biplane proved a tricky adversary, twisting in front of the attacking fighters to avoid their bullets, and then the speedy Messerschmitts would fly by, allowing Daniëls to open fire with his own 7.9-mm machine gun. The fighters eventually left the fight, one of them being claimed shot down by the intrepid Dutch aircrew. This may have been the Bf.109E (of 5(J)/TrGr 186) that made a forced-landing on Borkum during the flight back to its base at Wangeroege, 25% damaged.

Meanwhile, at MVK De Kooy other Bf 109s found the MLD training aircraft dispersed along the perimeter of the airfield. Alerted by the first Luftwaffe air attacks at ML bases to the south, the 11 D.21s of 1e JaVA scrambled to get airborne and were thus away from their base when the first raiders showed up, a pair of Messerschmitt Bf 109Es shooting up the radio van. Alerted, the "White Mice" squadron returned just in time to intercept a second wave of Messerschmitts, shooting down three of them, for no loss. (See SAFO #110, pg 44, 45) However, while the Dutch fighters were on the ground refueling, rearming and being repaired, the next wave of '109s came roaring in, shooting up everything in sight. Well away from the hangars in the northeast corner, the MLD's 15 FK.51s were parked along the south edge of the field and the S.9s along the west border. But this dispersal was not enough and, in this and subsequent raids, all 30 trainers were destroyed by strafing.

The naval part of the German campaign against Holland actually began in the pre-dawn hours of May 10th with seven Heinkel He 115B floatplanes from 9.Fliegerdivision laying mines off Den Helder, IJmuiden, Hoek van Holland and Vlissingen. One mine-laying Heinkel (from KüFIGr.106) strayed too close and the gunboat Johan Maurits van Nassau, stationed in the Schelde estuary off Vlissingen, shot it down with its 40-mm AA guns. It crashed burning into the Sloe, the harbor area east of Vlissingen.

The Dutch naval floatplane units were active from the very beginning that day. GVT.2 launched a Fokker T.8W ("R-2") from Braassemermeer at 0345 hours for a coastal reconnaissance patrol between IJmuiden and the Hook of Holland. Returning to its base, it was attacked by a Bf 110 as it taxied back to its moorings, but defending Dutch AA guns drove off the attacker.

Meanwhile, GVT.2 was ordered to send its T.8Ws to a beach near The Hague to pick up members of the Dutch Cabinet and fly

them to England. Two T.8Ws took off from Braassemermeer at 0800 ("R-3") and 0830 ("R-1") while the third ("R-4") flew from De Mok, escorted by a C.8W ("G-8") from GVT.6. "R-2" would follow as soon as it was refueled. "R-3" landed at Scheveningen beach and the Minister of Foreign Affairs, Meneer Van Kleffens, along with his wife; Minister of Colonies, Meneer Welter; and two secretaries crowded aboard. En route to the rendezvous "R-1" was intercepted by German fighters and the T.8W had its starboard fuel tank and both floats damaged by machine gun fire, which made it incapable of making the flight to England. "R-3" also had a damaged float but despite this the MLD pilot, Lt J. H. J. van Loon, managed to lift off just as more Messerschmitts arrived. One attempted to strafe the accelerating floatplane but missed, then turned its attention to the taxiing "R-1". The attacking German missed this target as well, allowing "R-1" to fly to MVK Schellingwoude for repair, while "R-3" successfully escaped to England.

Fifteen minutes later "R-4" arrived with its escorting C.8W. Unfortunately the marauding Messerschmitts returned at that time, strafing the luckless Fokkers until they were destroyed. The attacks killed Lt J. M. Uitenhoudt, the T.8W pilot, and his gunner, Cpl Kooyman, the first two MLD casualties of the war.

"R-2" arrived at Scheveningen shortly afterwards, after running the gauntlet of German fighters which damaged the wings, only to be ordered back to its base. En route back to Braassemermeer, the Fokker encountered a swarm of Ju 52/3m transports flooding the Rotterdam area; their escorting Bf 109s immediately turned on the slow, plodding T.8W. One engine was quickly shot out and a fuel tank was punctured and the pilot dived to alight on the Nieuwe Waterweg while his gunner continued to fend off their attackers. They successfully ran the plane aground on Rozenburg island and jumped out while the German fighters took turns strafing it. Once they departed the crew burned their disabled machine and escaped in a passing tugboat.

These operations, leaving only the damaged "R-1" at Schellingwoude, meant GVT.2 was effectively eliminated from the MLD's order of battle. They had been successful in the assigned mission, however. Minister Van Kleffens and his companions stepped ashore at Brighton, England, at 1100 hours.

Meanwhile GVT.4 prepared to bomb German forces landing at Valkenburg airfield, loading three 200kg (441 lb) bombs each and mounting bombsights. By the time they were ready, Dutch forces had retaken the airfield and the raid was cancelled. Instead three T.8Ws were sent on an armed reconnaissance of the eastern shore of the IJsselmeer. They flew individually, approaching at low altitude ready to bomb and strafe German units if they were found to have advanced to Stavoren and the IJsselmeer's eastern shore. No enemy units were found and the T.8Ws evaded the smothering German air superiority to safely return to Westeindermeer. There they were quickly moored beneath the shoreline trees and camouflaged, jute tarps being pulled over the wings to conceal the prominent orange triangle neutrality markings.

The next day the Luftwaffe returned to attack Dutch airfields, raiding MVK De Mok where they found the MLD's training floatplanes sitting on the water like sleeping ducks. They destroyed all ten C.14W training planes, the remaining two C.8Ws ("G-7" and "G-9") of GVT.8 and GVT.3's reserve C.11W ("W-3"). At Veere one of GVT.3's two C.14Ws ("F-21") and a spare ("F-23") were destroyed, leaving that unit with a single C.11W. Thus GVT.8 was wiped out and GVT.3 was reduced to half strength.

By the third day the MLD was reduced to a single combat unit with T.8Ws and C.8Ws (GVT.4) and four reconnaissance flights (GVT.5 at Veere and GVTs 1, 7 and 8 at Alkmaardermeer). The former was reinforced by two additional T.8Ws, "R-8" and "R-10" being hastily fitted out at the Fokker factory. The unit was ordered to mount another armed reconnaissance of the IJsselmeer's eastern shore, this time finding that the Germans had indeed reached Stavoren and were readying a ferry to transport troops across the inland sea to North Holland. Dutch naval vessels closed in and damaged the ferryboat while the T.8Ws safely evaded Luftwaffe patrols to return to their concealed base.

German air superiority was overwhelming Dutch forces everywhere. At Kornwerdzand, where the Afsluitdijk connected to Friesland, the small, fortified Veldleger force was holding out against the German 1st Cavalry Division. The Dutch navy attempted to assist by sending in the gunboat Johan Maurits van Nassau, which had already seen combat at Waalhaven, to lend fire support with its three 5.9-inch guns. It crept in close to shore under the cover of the morning fog and quickly silenced the German artillery battery. However, the next day, as it made its escape seaward, it was caught by Stukas, pummeled with bombs and quickly sunk.

Leaving to Fight Another Day

As the dauntless gunboat was being sunk and Rotterdam was being viciously bombed by the Germans, the MLD staff realized that its remaining units were powerless in the face of the Luftwaffe's overwhelming superiority. Accordingly the surviving units were ordered to evacuate to France. Joined by "R-1" which had been repaired at Schellingwoude, the seven T.8Ws and two C.8Ws flew first to Boulogne-sur-Mer and later to Cherbourg. One C.8W ("G-4") crashed on takeoff that morning, at least one of the crewmen climbing aboard one of the unit's other aircraft to make his escape.

These were joined by the ten C.14Ws from Alkmaardermeer, GVT.3's remaining C.11W and C.14W (plus the spare "F-17"), and GVT.5's trio of C.8Ws. The aircraft that could not be flown out were destroyed by the Dutch crews and mechanics. Amazingly the MLD units rendezvoused without having coordinated their evacuation, there being no destination specified and the units having had no contact with one another prior to departure or en route.

At Cherbourg the T.8Ws spent the first few days patrolling the French coastline. France, however, was in such desperate straits that the aircraft were modified to carry French bombs and the unit was reportedly tasked by the French to attack a Channel port that had just fallen to the Germans. This was correctly considered a suicide mission by the Dutch who had no ammunition for their FN-Browning machine guns and to make room for as many passengers as possible had brought no parachutes with them! Fortunately a message arrived from the new Dutch Naval HQ in London that very morning ordering to evacuate to the British seaplane base at Calshot. At 0600hours on

May 22, GVT.4's seven T.8Ws (along with two C.8Ws) took off, jettisoned their bombs into Cherbourg harbor and headed for Great Britain. The remaining 16 Dutch floatplanes followed shortly.

In Britain the MLD's surviving floatplane force was divided into two "eskadrilles" or "flights". The first, made up of the eight T.8Ws (now joined by "R-3" which had ferried the Foreign Minister to Brighton on May 10) and a C.14W target tug and their crews, was incorporated into the British Royal Air Force (RAF) as 320 (Dutch) Squadron on June 1, 1940, becoming the first non-British unit in the RAF to operate non-British aircraft. The Fokkers were overpainted with RAF camouflage and markings—with a small orange triangle on the side of the nose to signify their Dutch origin—and were registered in sequence AV958 through AV965 in the RAF serial system. Commanded by LTZ1 J. M. van Olm, the unit was immediately posted to Pembroke Dock seaplane base on the southwestern coast of Wales to undertake anti-U-boat patrols for the RAF's Coastal Command.

The second group—mainly the aircrews from the reconnaissance units—were sent to RAF Carew Cheriton, a land base near Pembroke, on July 2 to form 321 (Dutch) Squadron under LTZ2 H. Kolff and began training on the Avro Anson twin-engine patrol plane. Their Fokker biplanes were unsuitable for the European conflict so the C.11W and eleven C.14Ws were shipped to Surabaya to be incorporated into the MLD units in the NEI. The elderly C.8Ws were moored at Felixstowe as decoys.

During 320 Squadron's long and monotonous anti-sub patrols of the Bristol Channel and the Irish Sea, a U-boat periscope was spotted only once—and bombed, but without apparent effect. However, two T.8Ws (the former "R-9" and "R-10") were lost in operational accidents during this period. By this time the lack of spares for these non-British aircraft had become a problem and two of the remaining Fokkers (the former "R-3" and "R-8") were "stood down" as cannibalization donors to keep the other four flying. Even this only delayed the inevitable. On November 28 the remaining four T.8Ws took off from Pembroke Dock, headed for Felixstowe to be placed in storage. One of them did not make it, the former "R-1" ran out of fuel and, since there was no water to alight on, was destroyed in the resulting crash-landing. Luckily the crew was unhurt.

By this time, most of the personnel of 320 Squadron, having flown 141 operational sorties in their Fokker floatplanes, had transferred to RAF Leuchars, Scotland, to begin training on another non-British aircraft, the American-built Lockheed Hudson Mk.I maritime patrol bomber. (See Note 1)

Dutch Floatplanes in Luftwaffe Service

Meanwhile, at the Fokker factory, the Germans captured the remaining 13 mixed construction models in various stages of completion. The 12 all-metal versions of the twin-engine patrol floatplane had yet to commence, but the two T.8W/Cs ordered by Finland were 98 and 70 per cent complete. These were confiscated by the Luftwaffe, which ordered Fokker to complete the 12 all-metal models, thus providing two dozen additional aircraft to its maritime scouting force.

These were used by See-Aufklärungsgruppe 126 ("Sea Reconnaissance Group" or SAGr 126) for reconnaissance and convoy escort in the Eastern Mediterranean, supplementing the unit's obsolete He 60 float biplanes until mid-1942, when the unit was re-equipped with Arado Ar 196 float monoplanes. Thus the Fokker T.8W became one of the two twin-engine floatplane types to be used by both the Royal Air Force and the Luftwaffe.

While the two Finnish T.8W/Cs proved to incompatible to incorporate into SAGr 126, they were nonetheless delivered to the Luftwaffe (on 14 April and 14 July 1942) but their ultimate fate is unknown. Finally, the first T.8W/M all-metal example was used in a courageous escape to the UK on the night of May 5/6, 1941. It was flown by Lt Govert Steen, an LVA fighter pilot who had never before flown a floatplane, launched with the help of Fokker mechanic Wybert Lindeman. These two, with two members of the Amsterdam Resistance on board, successfully got the new T.8W airborne and Steen landed it safely in the sea off Broadstairs, England, on the morning of May 6, 1941. (Notes 2 and 3)

As is the Dutch spirit, the many brave men who evacuated their homeland as it was being overrun by the Nazis railed at the enforced passivity of mere maritime patrolling while there was a war to be won if they were ever to return home. Once 320 Squadron was again operational, it received permission to launch on its first of many offensive missions. On the one-year anniversary of the German attack on the Netherlands two of its Hudsons joined six RAF Ansons in an attack on the German-occupied Mandal airfield in Norway, reminding the conquerors that payback was on the way.¹

End Notes

1. In mid-October 1940, 320 Sqdn was called upon to use its Dutch floatplanes to aid their countrymen trapped in Holland. T.8W AV961 ("R-7") was to alight upon lake Tjeukermeer in Friesland to pick up members of the Dutch Resistance. The first attempt was aborted and by the night of the second try the Germans had found out about it. Thus the brave Dutch crewmen were met with a hail of machine gun fire as they arrived. And upon returning safely to England, they were shot at by British Home Guard units!

2. Soon after his escape, Wybert Lindeman joined 320 (Dutch) Sqdn. Lt Govert Steen joined the RAF's 129 Squadron and became a Spitfire pilot. The story of this dramatic escape is told by Jan Hof in his book *Niet Schieten... We Are Dutch*.

3. T.8W KD+GQ ("R-25") arrived in England well after 320 Sqdn had retired its Fokkers for Lockheed Hudsons. But since the new arrival was complete with German markings, it was retained by the RAF for possible clandestine missions such as the one described in Note 1 above. In the end it was never used.

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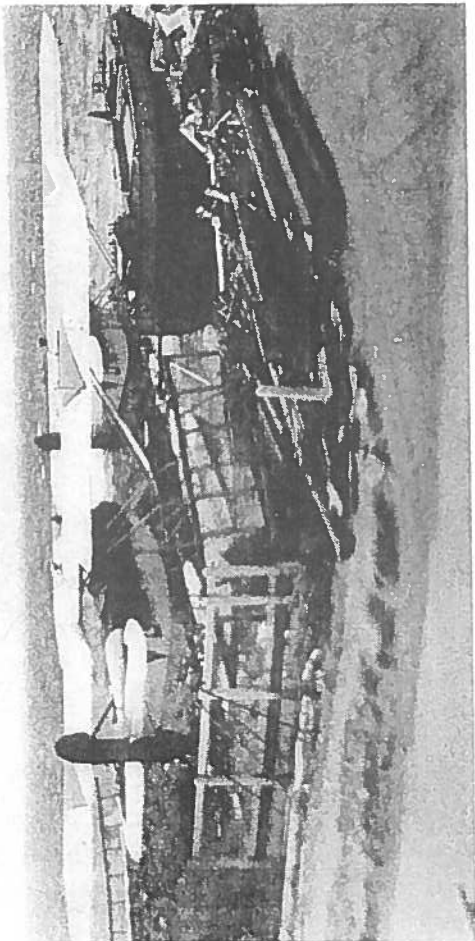
APPENDIX III

Marine Luchtvaart Dienst

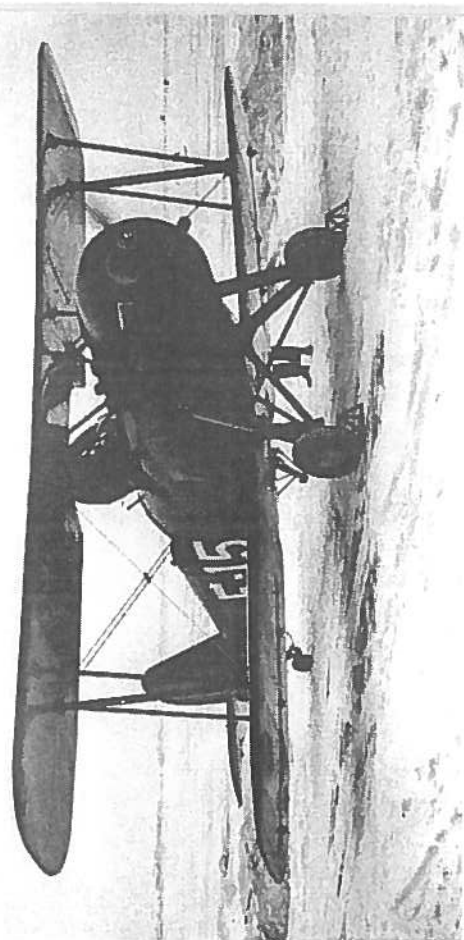
Air Order of Battle - 10 May 1940

Groep Vliegtuigen 1	3 C.14W	F-5, F-6, F-18	Alkmaardermeer
Groep Vliegtuigen 2	3 T.8W	R-1, R-2, R-3	Braassemmermeer
	1 T.8W	R-4 in Reserve	De Mok
Groep Vliegtuigen 3	2 C.14W	F-21 and F-24	Veere
	1 C.11W	W-14	Veere
	1 C.11W	W-3 in Maintenance at De Mok	
Groep Vliegtuigen 4	3 T.8W	R-6, R-7, R-9	Westeinderplats
	1 T.8W	R-11 in Reserve	Schellingwoude
	3 C.8W	G-1, G-2, G-4	Westeinderplats
Groep Vliegtuigen 5	3 C.8W	G-3, G-5, G-6	Veere
Groep Vliegtuigen 6	3 C.8W	G-7, G-8, G-9	De Mok
Groep Vliegtuigen 7	3 C.14W	F-1, F-3, F-13	Alkmaardermeer
Groep Vliegtuigen 8	3 C.14W	F-15, F-16, F-20, F-22	Alkmaardermeer
Spares	2 C.14W	F-17 and F-23	Veere
Water-plane Flying School	8 C.7W		De Mok
	10 C.14W		De Mok
Land-plane Flying School	15 Fokker S.9		De Kooy
	15 Koolhoven FK-51		De Kooy

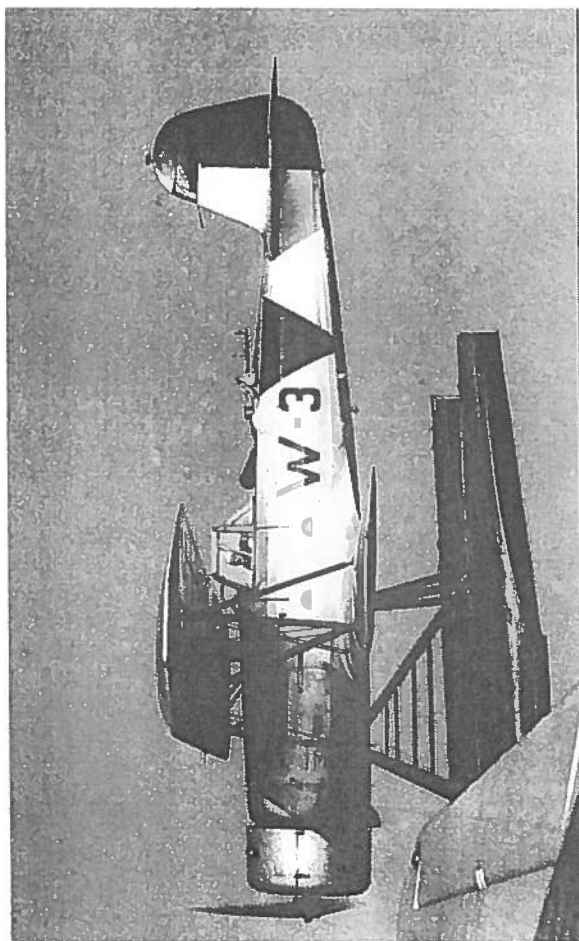
Source: Batailles Aeriennes No.9—La Campagne des Pays-Bas. 1999, pg 65.



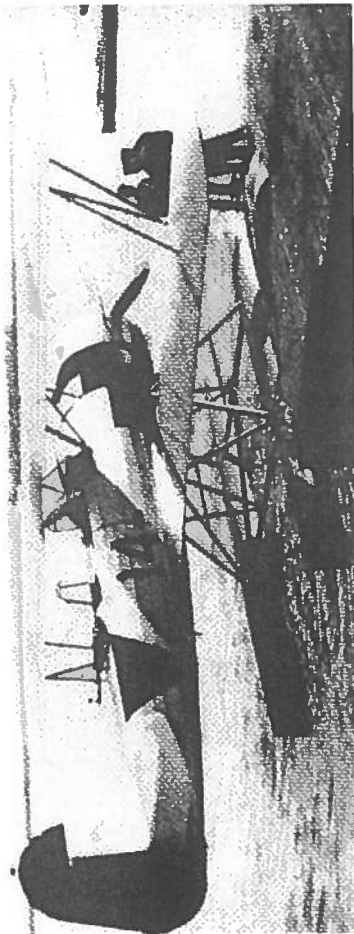
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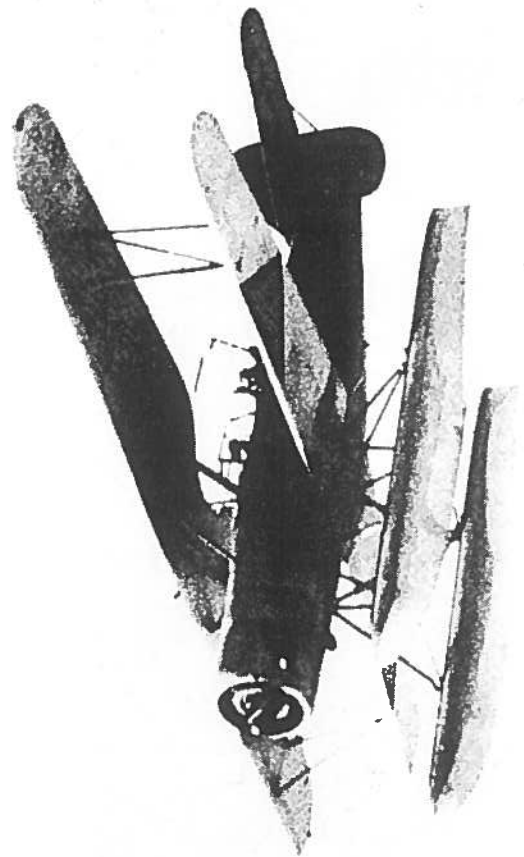
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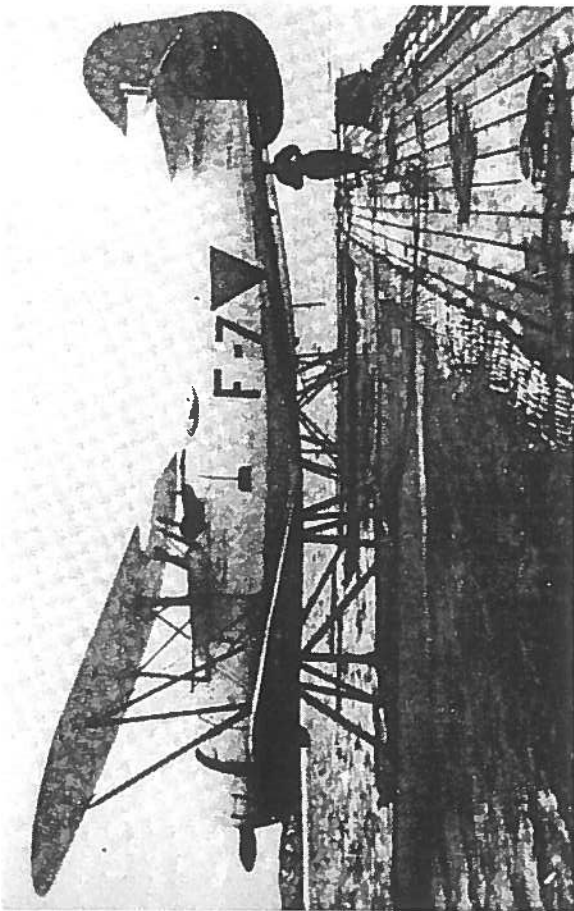
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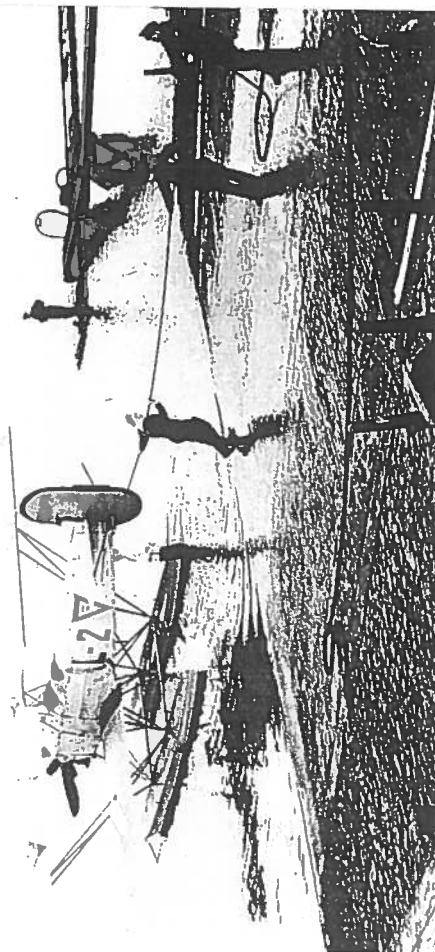
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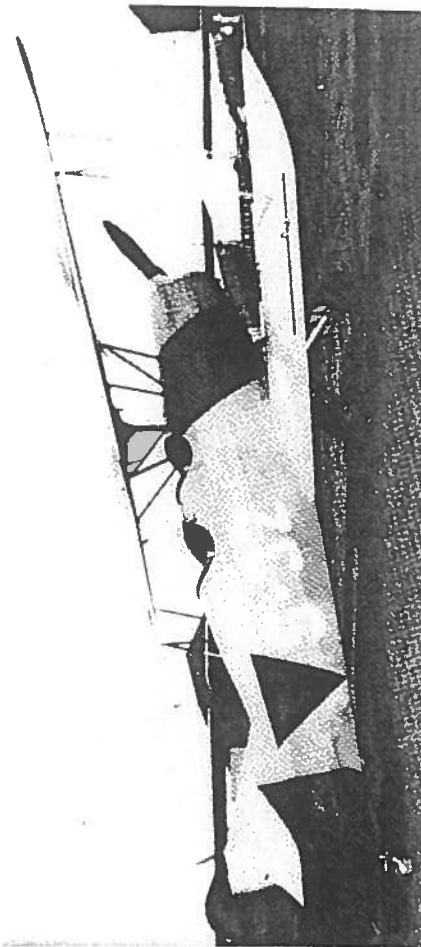
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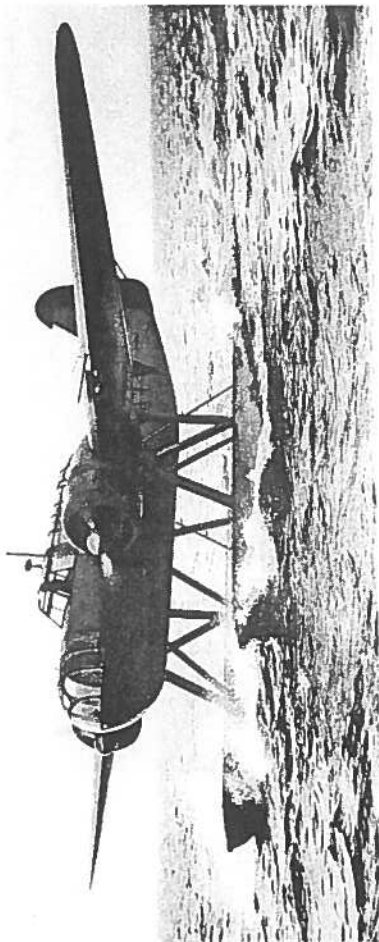
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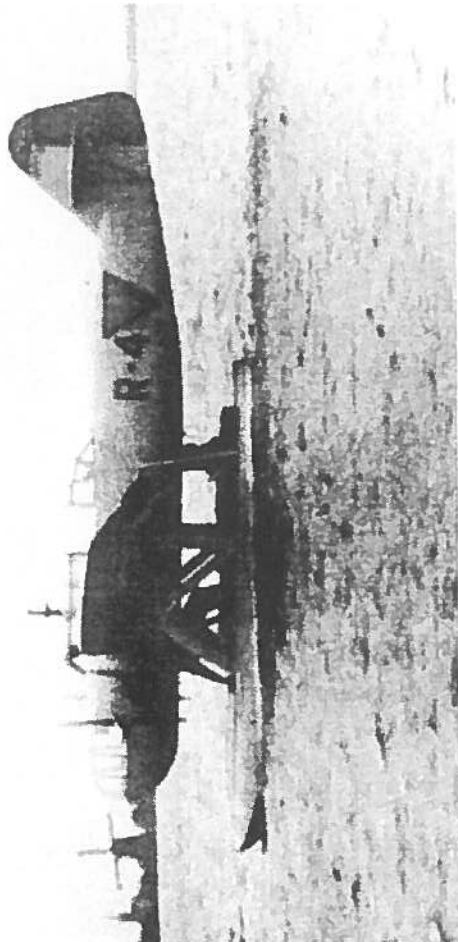
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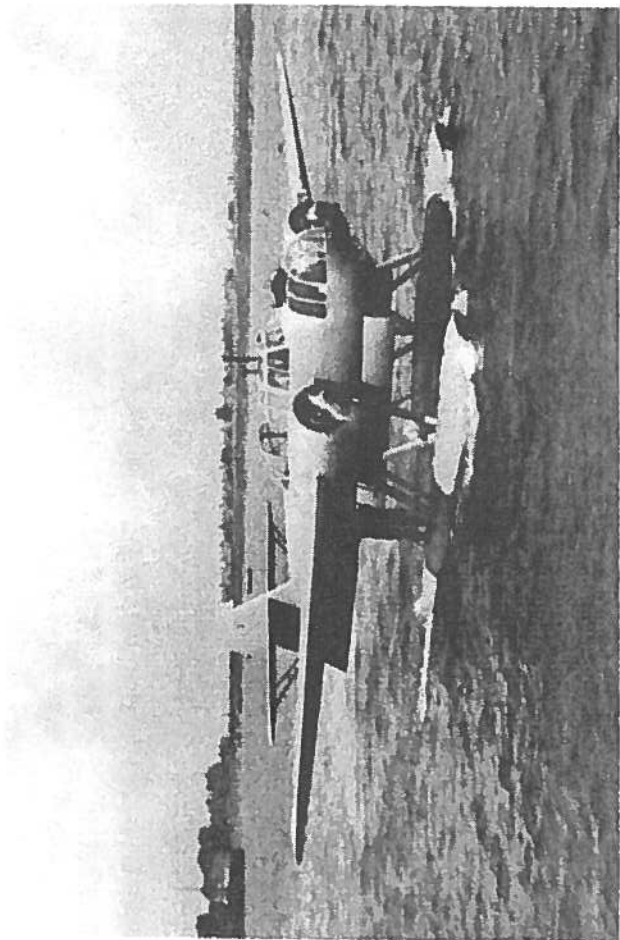
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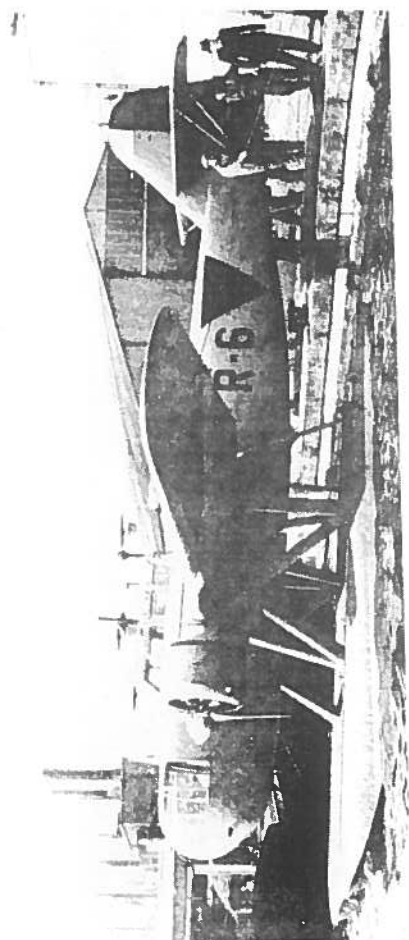
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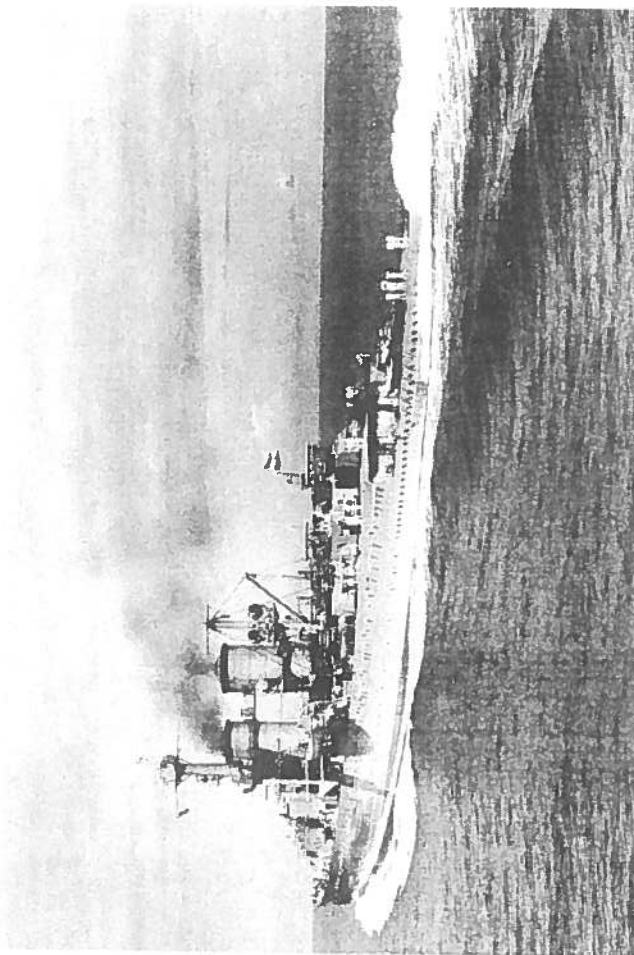
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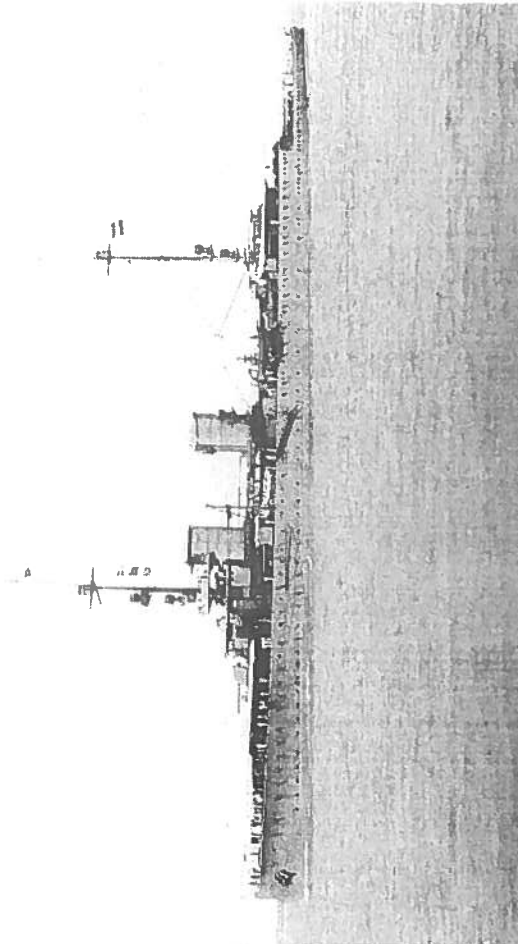
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Captions for the photos on pages 89-92, 94, & 74

All photos from the Thijs Postma Collection unless otherwise noted.

1.. During the “November Alarm” the MLD dispersed its aircraft from the highly exposed and vulnerable De Mok seaplane base to several “aircraft support locations”. The Fokker C.8Ws of GVT.4 were sent to Westeinderplas, a lake south of Schiphol airfield, where they were moored at the Kudelstaart yacht club, as seen here. The weather that winter was very bad, severely curtailing flying operations.

2. In fact, the winter of 1939/40 was so severe all of the MLD’s fresh water floatplane bases iced over resulting in the floatplane units being withdrawn to De Mok. However, during the severest parts of the winter even this salt water base was iced in, resulting in the MLD training planes at De Kooy being called upon to fly the coastal “Neutrality Patrols”. Here Koolhoven FK-51 “E-15” warms up its engine in preparation for such a mission

3. For the “Neutrality Patrols”, MLD floatplanes were armed in case they encountered RAF or Luftwaffe intruders who might attack the investigating Dutch aircraft. Here “W-3”, one of GVT.3’s powerful C.11W jachtverkenner (fighter-reconnaissance), shows off its FN-Browning 7.9-mm machine gun mounted on the rear cockpit. This aircraft was destroyed at De Mok by Luftwaffe air raids on May 11th.

4. Aircraft “W-14” was the other C.11W assigned to GVT.3. It was based at Veere and spared destruction by the Luftwaffe. The sole example of its type to escape during Meidagen, after safely reaching England, it was shipped to the NEI to join the 13 already based there. Here it is seen shortly after the application of the orange triangle Neutrality Markings. Note that the “W” has had to be painted over in the process, and has yet to be reapplied.

5. Even the smaller C.14W floatplanes—a type used for both training and light reconnaissance—were armed and used for the “Neutrality Patrols”, such as “F-1” seen here. A C.14W from GVT.1 (“F-5”) was the first Dutch aircraft to encounter German fighters when it was intercepted by three Bf 109Es and successfully fought them off, damaging one of them. The crew was Sgt Sgt A. J. Daniëls, with Lt M. R. van Kooij; they survived the engagement.

6. For reasons unknown, C.14W “F-1” was reseried “F-7” (and “F-7” was renumbered “F-1”)—as evidenced by the repainted serial number in this photo—and was assigned to De Mok as a floatplane trainer. With the other nine C.14Ws at De Mok, this aircraft was destroyed by Luftwaffe air attacks on May 11th.

7. While the MLD’s operational aircraft deployed to the five “aircraft support locations”, the MLD’s training floatplanes remained at De Mok. Here a team of “bluejackets” tow C.7W “L-2” onto the brick launching ramp. Note the anchor strapped to the side of the fuselage beneath the rear cockpit. All C.7Ws were lost at De Mok during Meidagen. (Johan de Wolf Collection)

8. The MLD land-based trainers remained at De Kooy. The 15 Fokker S.9 biplanes, resplendent in their new paint scheme of overall Gloss MLD Blue, were parked along the west edge of the open airfield. Koolhoven FK-51s—in the older MLD Khaki Oil Varnish topsides and Sky Blue Oil Varnish bottoms—were arrayed along the southern border of the airfield. This dispersal did not prevent their destruction.

9. The MLD’s only true combat capability lay in the two flights of T.8W twin-engine floatplanes. During the winter and spring of 1939/40, the prototype, “R-1” conducted torpedo-launching trials using wooden dummies. The T.8W was designed to carry and launch the 18-in (45-cm) naval torpedo. Fortunately, the German navy, crippled in the Norwegian campaign the previous month, was unable to mount any serious surface forays into Dutch waters because the MLD had not yet acquired any torpedoes for use by their aircraft. Thus the T.8W flights were limited to bombing operations.

10. T.8W “R-1” led an eventful life. It was both the prototype and the first production example and was used extensively in flight tests and service trials. Assigned to GVT.2, it was part of the operation to fly Dutch Cabinet Ministers to England, but was damaged by German fighters. Repaired at Schellingwoude, it joined GVT.4’s evacuation to Cherbourg, France, then became part of 320 (Dutch) Squadron at Pembroke Dock, Wales. On the T.8Ws’ last mission—the transfer to Felixstowe to be placed in storage—it finally had had enough and crashed due to fuel starvation. The crew was unhurt.

11. T.8W “R-2” flew the MLD’s first mission of its type in Meidagen, patrolling the coast from IJmuiden to the Hook of Holland. After refueling at Braassemermeer, it was late joining the operation to ferry the Dutch Ministers to England and was ordered back to base. Encountering Bf 109Es en route it was soon badly damaged, alighted on the Nieuwe Waterweg in Rotterdam and was beached at Rozenburg Island. Strafed by German fighters, it was finally destroyed by its crew before they escaped on a tugboat.

12. T.8W “R-4” was stationed at De Mok as GVT.4’s reserve aircraft. For the ferry mission to fly the Ministers to England it—and a C.8W of GVT.2—were ordered flown to Scheveningen. As the two floatplanes alighted and taxied towards shore, German fighters arrived, strafing them repeatedly. Both Dutch planes were destroyed—Lt Uitenhoudt and Cpl Kooyman being killed in “R-4”. (Authors Collection)

13. T.8W “R-6” was assigned to GVT.4. After flying two armed reconnaissance missions in Meidagen, it escaped via Cherbourg to the UK. Serialized as AV960, it joined the RAF as part of 320 (Dutch) Squadron. After a number of missions over the Irish searching for U-Boats, this was one of three T.8Ws to have survived their operational experience. It was placed in storage at Felixstowe on 28 November 1940. Note white tip to the top of vertical fin/rudder balance.

14. T.8W “R-11” was one of the newest of its type assigned to GVT.4 and was positioned at Schellingwoude, the small MLD base near Amsterdam. (Seen here, a T.8W taxis in at Schellingwoude.) “R-11’s” only mission during Meidagen was the evacuation to Cherbourg. After joining 320 Squadron as AV965, it was used extensively for anti-submarine patrols and an occasional search-and-rescue mission. Finally, it too was placed in storage at Felixstowe and in June 1941, the former “R-11” (along with “R-6” and “R-7”) was scrapped there.

15. Hr. Ms. Java, a 6,670-ton light cruiser completed in 1924, was the first major Dutch warship to embark floatplanes. These were Fairey IIIDs stowed amidships, one on each side. Upon close inspection (with a magnifying glass) one can be seen here stored with its wings folded between the funnels. (Dutch MOD/Institute of Military History Photo)

16. Sister ship of the Java, Hr Ms Sumatra was completed the following year and embarked the second pair of Fairey IIID

floatplanes. Underway, the ship's portside floatplane can be seen, its wings jutting out over the side (and hence the shadow along the cruiser's hull beneath the forward funnel) just ahead of the lifeboat abeam the aft funnel. (Dutch MOD/Institute of Military History Photo)

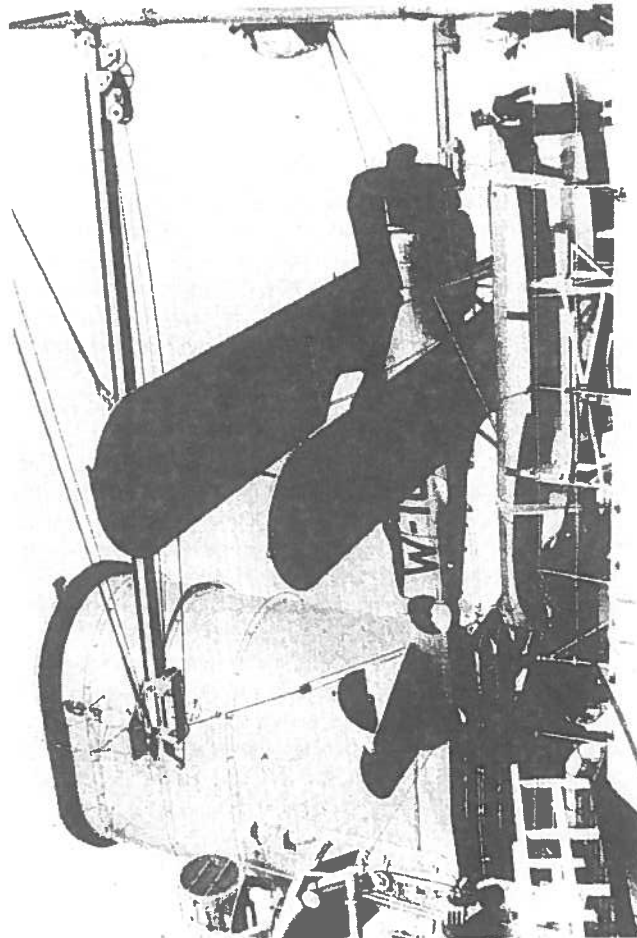
17. The two light cruisers Java and Sumatra later embarked Fokker C.11Ws. Here "W-10" rests in its stowage cradle along the starboard beam of one of the two vessels.

18. The 6,500 ton Hr Ms De Ruyter, the flagship of the Dutch Fleet, was launched in 1935 the only warship to embark floatplanes with a catapult. Not visible in this view, it was mounted abaft the funnel, just forward of the aft rangefinder mounted on the platform among the 40mm AA battery. (Dutch MOD/Institute of Military History Photo)

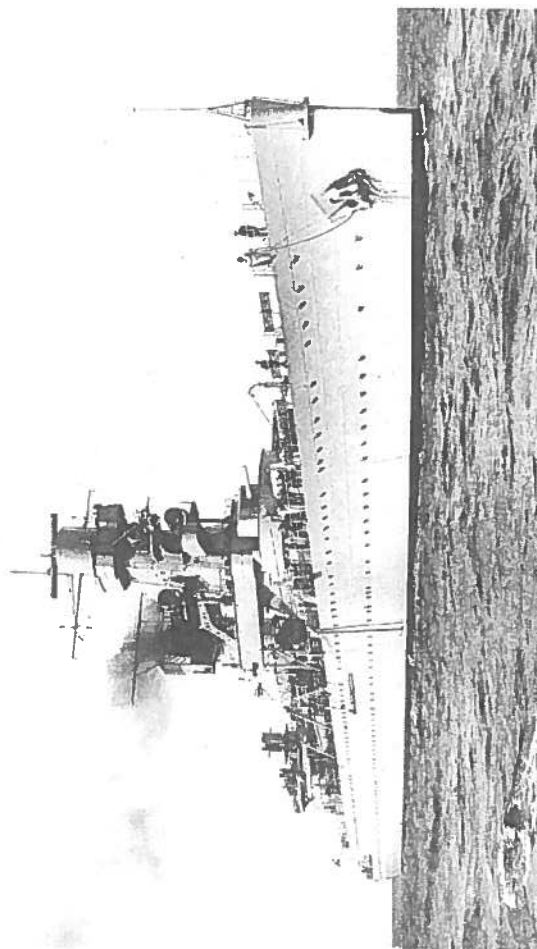
19. C.11W "W-4" mounted on the catapult aboard Hr Ms De Ruyter. This photo is taken looking forward from the port edge of the AA platform (which also provided stowage for a second C.11W). Note the compressed air cylinder mounted to the side of the Heinkel-made floatplane catapult.

20. The C.11W "W-6" was carried amidships on the flotilla leader Hr Ms Tromp, just abaft the single funnel. To each side of the floatplane's elevated stowage deck were the ship's torpedo tubes, seen covered in the bottom left portion of the photo.

17



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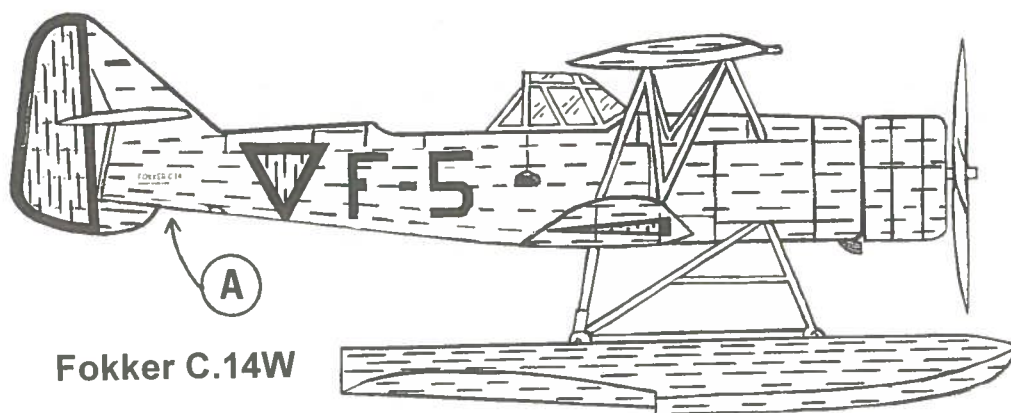


21. The destroyer *Van Galen* passing in review in the Nieuwe Diep at Amsterdam.

During *Meidagen* this gallant ship bombarded German air assault troops holding the Willems Bridge across the Nieuwe Maas in Rotterdam, and was later sunk by *Stukas* as it attempted to retire out of the embattled area. By the time of this photo the provision for floatplane carriage had been deleted. However, the crane, mounted to the mainmast (the aft mast) is still evident, the aircraft being secured to a deck above the torpedo tubes located beneath the crane's boom. (Dutch MOD/Institute of Military History Photo)

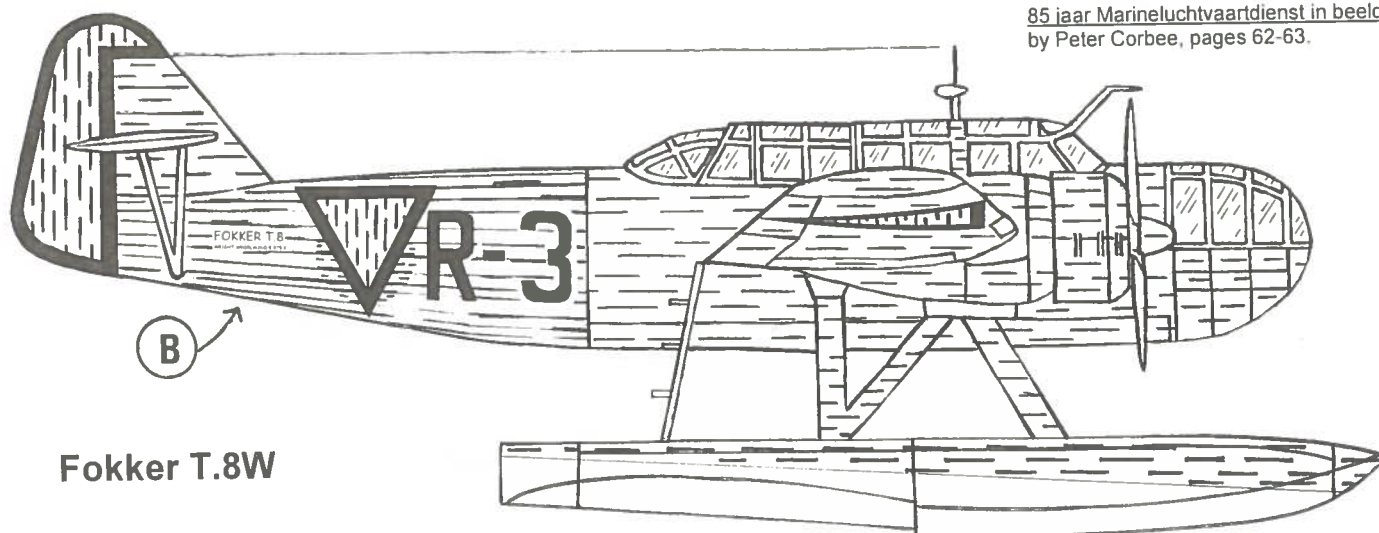
22. While not a Dutch warship capable of embarking a floatplane, the gunboat Johan Maurits van Nassau played an important, albeit ultimately tragic role, in the Meidagen fighting. On the morning of May 10th its 40mm AA guns shot down a Luftwaffe He 115A attempting to lay mines at the mouth of Vlissingen harbor, and later that day its 5.9inch guns bombarded German assault troops holding the Willem Bridge in Rotterdam. On May 12th found it across the IJsselmeer bombarding German artillery batteries supporting attacks on Fort Kornwerdzand. It was sunk by Stuka dive bombers the following day as it attempted to escape to England. (Dutch MOD/Institute of Military History Photo)

Aircraft of the *Marine Luchtvaart Dienst*



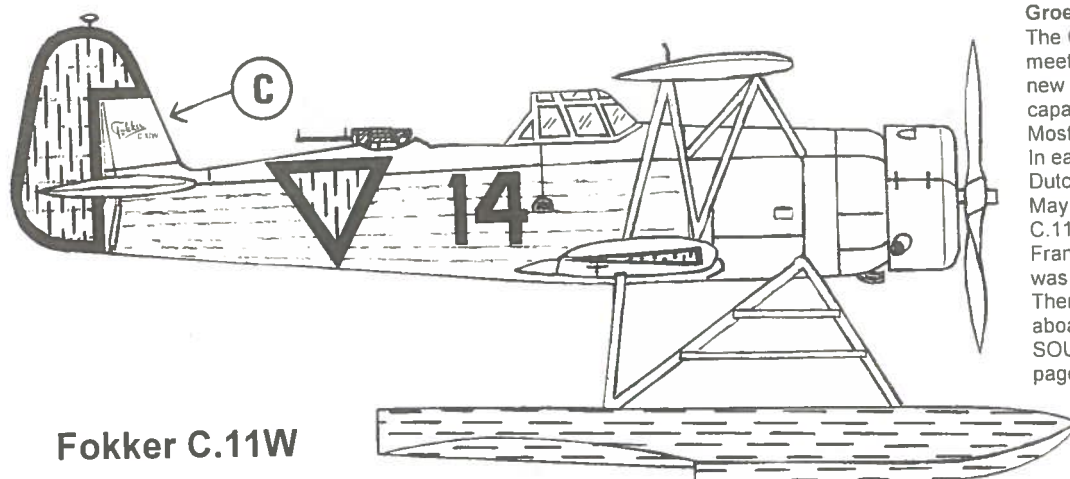
Fokker C.14W

Fokker C.14W #F-5 (GVT 1)
Groep Vliegtuigen 1, Alkmaardermeer
 On January 2nd 1939 the *MLD* ordered 24 C.14Ws to be used in the NEI. None of these left Holland because of rising tensions in Europe. Nine were used to form aircraft groups GVT 1, 8 and 9, the rest were used by the flying school or as spares. Early morning on May 10th #F-5 took off from Alkmaar lake for a patrol flight along the North Sea coast. During the flight Sgt Daniels and Lt Van Kooij encountered invading German aircraft. Soon the dauntless crew was battling three Bf 109s. While evading the gunfire of the faster Bf 109s they answered with precision machine gun fire. The damage to one of the German planes caused the other two to break away. After escape to England #F-5 was shipped to the NEI and served as a training aircraft until March 1942. SOURCE: 85 jaar Marineluchtvaartdienst in beeld by Peter Corbee, pages 62-63.



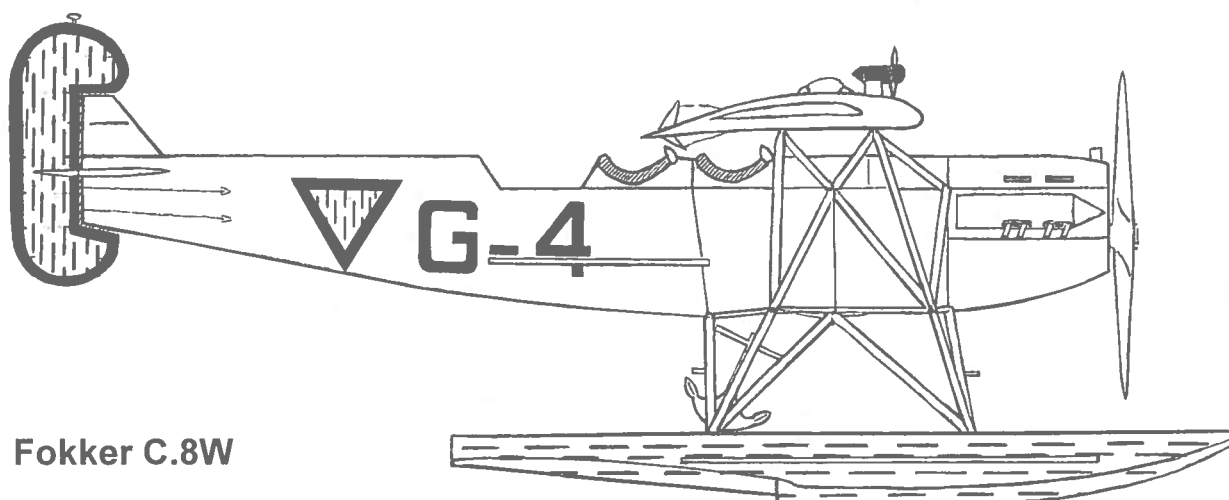
Fokker T.8W

Fokker T.8W #R-3 (GVT 2), Groep Vliegtuigen 2, Braassemermeer. Since production of this type had just begun, only eight T.8Ws were in service with the *MLD* when *Meidagen* started. These were divided equally between GVT 2 and 4, each group having one as a spare. On the morning of the German invasion GVT 2 was ordered to transport Dutch Cabinet members to England. Of the four T.8Ws involved in this operation only #R-3 managed to embark two Cabinet Ministers and escape to England. This aircraft flew with RAF 320SQN - as AV959 - until September 1940. SOURCE: Batailles Aeriennes No.9 La Campagne des Pays-Bas by Michel Ledet, page 65.



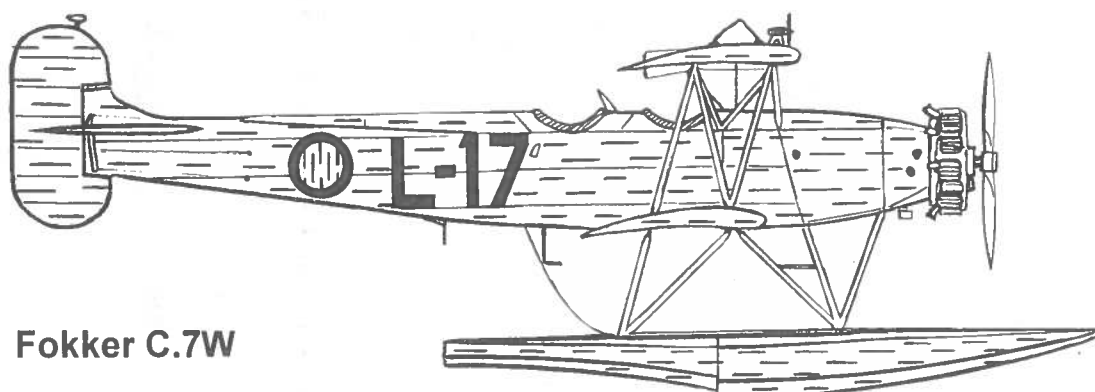
Fokker C.11W

Fokker C.11W #W-14, (GVT 3)
Groep Vliegtuigen 3, Schellingwoude.
 The C.11W was designed mid-1930s to meet the need of the Dutch Navy for a new shipboard reconnaissance floatplane capable of being launched by catapult. Most of the 15 aircraft served in the NEI. In early 1940 only three were in the Dutch home waters, forming GVT 3. On May 14th 1940 #W-14 was the only C.11W left capable of evacuating to France and England. Once in England it was dismantled and shipped to the NEI. There it continued to serve the *MLD* aboard *Hr.Ms. Tromp* until March 1942. SOURCE: Avions No.8 October 1993, page 7.



Fokker C.8W

Fokker C.8W #G-4 (GVT-4), Groep Vliegtuigen 4, Westeinderplas. The first and only C.8 built for the LVA proved to be unsatisfactory. The C.8W redesign on floats for the MLD proved a much greater success and nine aircraft were ordered of his 3-seat reconnaissance bomber trainer, equipping three GVTs. During *Meidagen*, GVT 4 was in the midst of transition from the C.8W to the T.8W and thus had double the usual number of aircraft. Early morning May 14th GVT 4 were ordered to evacuate to France. Aircraft #G-4 had to be left behind because it crashed during take-off from the foggy Westeinderplas. SOURCE: Ontsnapping uit Kudelstaart by J.W. de Wijn.







Fokker C.7W

Fokker C.7W #L-17, Waterplane Flying School, De Mok: Developed as a shipboard reconnaissance floatplane in 1928, the MLD ordered 12 of these to fulfill this task in the NEI. Eighteen were also ordered as training aircraft at De Mok. After a shooting incident on September 13th 1939 between Dutch and a German floatplanes, plans were made to exchange the Dutch red-white-blue national insignia on all aircraft for the orange disk used during WWI. Aircraft #L-17 was one of the first to receive this short lived marking. Naval staff soon realized that the use of this marking might cause problems in the NEI and ordered the application of a black-bordered orange triangle. SOURCE: Mei 1940 by Schoenmaker / Postma, page 70.

FOKKER T.8
WRIGHT WHIRLWIND R 975 3

Fokker
C XIW

FOKKER C.14
WRIGHT WHIRLWIND

	Dutch Insignia Orange FS 22243		Color Key Black (Insignia / Registration)		Metallic Finish (Silver / Aluminum)
<p>C.7W Marinegrijs (Grey) FS 26440 Noordzeegrijs (Grey) FS 26081</p>			Naval Grey (Different Shades)	<p>All Plane Floats entirely Grey or with Aluminum underside</p>	
		<p>C.14W & T.8W Fokker/Holland Grey, FS 26165 Fokker/Holland Grey Light, FS 26440</p>			
		<p>SOURCE: <u>Camouflage en Kentekens</u>, by J. H. N. Greuter, <i>et.al.</i>, Bergen, NL: B.V. Bonneville, 1997. pgs 21-23, 111-125, 216-222.</p>			

Bristol Bulldogs of the Baltic Republics

Alex Crawford

The Bristol Bulldog entered RAF service with 3 Squadron in June 1929. This pugnacious little fighter had a top speed of 178mph at 8,000ft making it the fastest RAF fighter then in service. It was well liked by the pilots who flew it although it could be quite deadly to the inexperienced pilot. Low level aerobatics were not recommended as it had a tendency to loose height. It was in such an aircraft that Douglas Bader lost his legs when the wingtip of his Bulldog hit the ground while he was performing a slow roll at low level.

Several foreign air forces purchased the Bulldog. Among them were the two Baltic States of Estonia and Latvia, which were among the first to order the Bulldog.

Estonia

In 1928 the Estonian Aviation Defence Force (EADF) underwent a period of reorganisation. A third Aviation Division (Üksik lennuväedivisjon nr.3 – ÜLD 3) was created in July 1930. This was to be organised into four squadrons (flights) under the command of Capt Eduard Reissaar. Capt Reissaar had attended a RAF sponsored course in 1929 and had flown with 3 (F) Squadron at Upavon learning to fly the Bulldog. A delegation from Estonia arrived at Filton in the UK to evaluate the Bulldog. The aircraft had Estonian markings applied but with no serial number.

The trials proved a success and an order 12 Bulldog MkII's was placed. These aircraft, c/n's 7447-7458, were delivered in 1930 at a cost of 53,725 Estonian Crowns (Ekr) each. The Bulldogs received the serial numbers 122-133. Along with the Bulldogs two Armstrong-Whitworth Siskin III's were also purchased to be used as trainers for the pilots that were destined to fly the Bulldogs. These two aircraft wore the serials 134-135.

Eleven of the Bulldogs were fitted with French built Gnome-Rhone Jupiter VI engines and the other one had a Jupiter VII. The French weren't too happy with the sale of French engines on a British aircraft to another country, but this problem was soon resolved. The Bulldogs were fitted with British machine guns and one aircraft was fitted with a wireless set for communication purposes.

During the winter months the Bulldogs were fitted with skis to enable them to operate from the snow bound airfields.

During their time in Estonia the Bulldogs appear to have had an accident free service, except for two Bulldogs which required repair after each suffered a heavy landing. One such mishap occurred during the summer of 1933 when Lieutenant H Kirsipuu was returning from a routine flight in Bulldog #123. As he came in to land at Jõhvi airfield he misjudged his height and landed rather heavily breaking the aircraft's back. Kirsipuu was unhurt and the Bulldog was eventually repaired and put back into service. In the same year Lt Alfred Kriisk carried out a creditable landing after his propeller broke free from the engine during a training flight.

During late 1936 the Estonian Government wanted to modernise its air force. Taking advantage of the Spanish Civil War it offered 8 Bulldogs and a number of other aircraft to the Republican Government. In 1937 the Bulldogs, c/n's 7448-7452 and 7455-7457, along with a number of Potez 25A reconnaissance aircraft (possibly nine) were sold to the Spanish Republicans.

At one point it was considered upgrading the Bulldogs with Mercury VI2 engines. A similar upgrade had been

successfully carried out on a number of Letov S228Es. Unfortunately the conversion was never carried out.

The remaining four Bulldogs were in service with the 3rd Air Division, commanded by Major Reissaar and based at Tallin. In February 1940 Lt Lembit Raidal was on a training flight in Bulldog #129 over Tallin. Lying at anchor off Tallinn Harbour were three Soviet warships, the 'Karl Marx', 'Volodarski' and a torpedo boat. They suddenly opened fire on the Bulldog, but fortunately for the pilot their aim was poor and he escaped any damaged. In fact the pilot did not know he was being fired upon until his return to base.

When the Soviets occupied the Baltic States in June 1940. The Bulldogs, and all other aircraft, were captured and were subsequently stored in the open at Jägala. The Bulldogs were probably used by the Soviets and would have worn the Red Star in place of the Estonian markings. When the Germans launched their invasion on 21st June 1941 the Russians ordered that all aircraft should be burnt rather than let them fall into German hands. So on 26th June 1941 the Bulldogs were all set on fire and destroyed.

Latvia

The Latvian Government ordered five Bulldog MkII's and these arrived in the country in September 1929. Capt A Dzenitis had previously been sent to England for trial flights in the Bulldog. These Bulldogs, c/n's 7353-7357, were the first to be ordered by a foreign nation. The aircraft were fitted with Gnome Rhone Jupiter VI engines. They were armed with two Oerlikon machine guns. Latvian Bulldogs had their upper wing moved forward a few inches. This may have been carried out to provide the pilot with improved visibility. This modification may have been responsible for a number of accidents.

They served with the 1st Fighter Squadron (1. Eskadrons) and were based at Spilve, which was located near the capital of Riga. In July 1930 a further seven Bulldogs were purchased, c/n's 7439-7445. The first five were powered by Gnome-Rhone Jupiter VI engines and the last two were fitted with Gnome-Rhone-9ASB engines. The Bulldogs replaced the Martinsyde ADC-1s, which were passed on to 2nd Fighter Squadron (2. Eskadrons). The Bulldogs served as Latvia's front line fighter up until the autumn of 1937 when Gloster Gladiators entered service.

The first five Bulldogs wore the serial numbers 1-5 for a very short period. They were then numbered 70-74. The second batch of seven was numbered 78-84. In later years some aircraft carried a suffix letter 'K' after the serial. This indicated that the plane is being held in "war reserve" (Kara Rezerve). Those Bulldogs that were in the Kara Rezerve were 74K, 78K, 80K, 81K and 82K.). Only the most experienced pilots were permitted to fly these machines. This was a way to extend the life of the aircraft.

In 1935 an attempt to standardise the naming of aircraft by types was put in place. As a result the Bulldog received the designation D3.

In July 1938 a Bulldog piloted by a pilot named Binders strayed into Soviet territory after getting lost. The pilot eventually landed in Poland. He was able to return to his base without any further mishap.

Between the 1st and 2nd of October 1938 a 'Flight Around Latvia' was organised. This was the third such flight. The aim of this was to challenge aviators in the skill of piloting, navigating dropping markers and precision landing. It was

open to civil and military pilots. Two of the participants included Bulldog #72 and 82 flown by G Sapratnieks and Lt Arvids Lasmanis respectively. The route for the first day was Riga (Spilve) - Tukums - Talsi - Ventspils - Kuldiga - Liepaja - Auce - Jelgava - Bauska - Krustpils. The return on the 2nd day went via Krustpils - Daugavpils - Varaklani - Gulbene - Valmiera - Rujiena - Matisi - Riga (Spilve). Bulldog #72 suffered a blown tyre while landing at Liepaja. After dropping a marker at Valmiera Bulldog #82 suffered engine failure on the second day and came down near Smiltene. The aircraft suffered some damage and took no further part in the flight.

There is some uncertainty as to what units operated the Bulldogs after 1939. One source states that three Bulldogs served with 3rd Fighter Squadron (3. Eskadrons), along with six Gladiators. An ex-officer claims that the remaining Bulldogs were used to form 4th Fighter Squadron (4. Eskadrons) in April 1939. When the Soviets sent the Latvian Government an ultimatum on 15 June 1940 the 4th Fighter Squadron was dispersed to Ramava, where it remained until the Latvian Air Force was officially disbanded in late 1940. The remaining five Bulldogs were apparently dismantled by the Soviets and put into storage, where it is assumed the aircraft simply rotted away. There is also the option that, like their Estonian counterparts, the Bulldogs were used by the Soviets and wore the Red Star in place of the Latvian markings.

During their time in service a total of seven Bulldogs were lost in accidents. They are listed as follows:

3/12/30: During aerobatics over Riga/Spilve, Sgt Peteris Lodzins was killed when his Bulldog #73 entered a flat spin and crashed.

4/11/35: While coming in to land at Riga/Spilve 1/Lt Aleksandrs Hvastoks was killed when his Bulldog #81 collided with an Udet-Flamingo #95 trainer. The Flamingo was landing when the Bulldog hit it from the side. Capt-Lt Janis Putnins and Janis Ravins were the occupants of the Flamingo and both died in the collision. Janis Ravins was undergoing pilot training at the time.

15/6/36: Capt-Lt Hugo Freimanis was carrying out a series of demonstration flights in Bulldog #74 for an infantry unit near Daugavpils when he dived straight into the ground. It was thought that he had committed suicide due to a failed marriage.

22/6/36: Sgt Karlis Iesalnieks was 'beating up' Krustpils airfield when his Bulldog #83 hit a telegraph pole and crashed to his death.

3/12/36: Sgt Alfreds Danders, in Bulldog #78, died when his aircraft entered a flat spin during aerobatics over Riga/Spilve.

4/38: During gunnery practice 1/Lt Emils Kanna hit the ground writing off his Bulldog #80. He was able to clamber from the wreckage unhurt.

31/5/40: A third aircraft was lost after entering a flat spin, again during aerobatics. Lt Konrad Nagainis baled out but his parachute failed to open. It was thought that he hit the aircraft when he baled out and was knocked unconscious.

As can be seen the Latvians had a higher accident rate than the Estonians as regard the Bulldog. This may be due to the fact that the Estonians purchased two Armstrong-Whitworth Siskin III two seat trainers. This provided the pilots with the necessary experience of high-speed top of the range fighter aircraft.

Colours and markings.

Estonian Bulldogs were aluminium overall with black struts. Cornflower blue/black/white triangles were placed above and below the wings and on the fuselage sides. Serials were black, and some had a blue shadow, and were placed on the fuselage midway between the cockpit and tail plane. The rudder was horizontally striped cornflower blue/black/white.

In Soviet service the Bulldogs would have had the Estonian markings removed and replaced with Red Stars in all six positions and possibly on the fin/rudder. The serial number may have been removed as the Estonian colours, black, with a cornflower blue drop-shadow, against a silver (white) background, were too close to the colours of the Estonian national flag. It is doubtful if the Soviets would have tolerated that. Soviet numbers may have been applied to the fuselage but, if applied, they remain unknown.

Latvian Bulldogs were overall aluminium with dark green on the top of the upper wing and along the top of the fuselage. National markings consisted of a crimson red Ugunskrusts (Fire Cross) within a white circle in six positions. On the wings the markings were placed asymmetrical. This was done in order to confuse an enemy pilot from determining the range of the target to him. Serials were in black and were first placed on the rudder and then later, about 1937-38, on the fuselage after the roundel.

[Ed: See the review of Alex's book, *Bristol Bulldog and Gloster Gauntlet*, reviewed elsewhere in this issue of SAFO.]

Estonian Bulldogs

Serial	C/N	Comment
122	7447	Set on fire and destroyed, 27 June 1941.
123	7448	Sold to Spain, 6/37.
124	7449	Sold to Spain, 6/37.
125	7450	Sold to Spain, 6/37.
126	7451	Sold to Spain, 6/37.
127	7452	Sold to Spain, 6/37.
128	7453	Set on fire and destroyed, 27 June 1941.
129	7454	Set on fire and destroyed, 27 June 1941.
130	7455	Sold to Spain, 6/37.
131	7456	Sold to Spain, 6/37.
132	7457	Sold to Spain, 6/37.
133	7458	Set on fire and destroyed, 27 June 1941.

Latvian Bulldogs

Serial	C/N	Comment
70	7353	
71	7354	
72	7355	
73	7356	Entered flat spin and crashed near Riga/Spilve, 3/12/30. Sgt Peteris killed.
74K	7357	Dived into ground near Daugavpils, 15/6/36. Capt-Lt H Freimanis killed.
78K	7439	Entered flat spin and crashed near Riga/Spilve, 3/12/36. Sgt A Danders killed.
79	7440	
80K	7441	Crashed during gunnery practise, 4/38. 1/Lt E Kanna okay.
81K	7442	Collided with Udet-Flamingo while landing, 4/11/35. 1/Lt A Hvastoks killed.
82K	7443	
83	7444	Hit a telegraph pole and crashed, 22/6/36. Sgt Karlis Iesalnieks killed.
84	7445	

Acknowledgements: I would like to thank Arvo L Vercarmer and Dave Zulis for their kind help and assistance during my research for this article. If anyone can provide further details of these Baltic Bulldogs then I would be grateful if they could contact me at acrawford@blueyonder.co.uk.

Alex Crawford (SAFCH #1619), 13 Holly Bank, Methil, Fife, KY8 2AU, Scotland.

Cessna 337 of the Aviacion Naval Ecuatoriana

Jorge Delgado Panchna

Since its foundation, the Aviacion Naval Ecuatoriana has used many different types of airplanes. One of these was the Cessna 337. Between 1971 and 1973, naval aviation received three Cessna 337 model G and F. The pilots named them "chupas y soplas" which literally translates as "suck and blow" (or, more colloquially, "push-pull"). They were given serial numbers AN-204, AN-206, and AN-211. These aircraft were painted overall white with blue trim; the standard colors for navy planes. The serials were black. The main task of these aircraft was to train pilots to fly twin-engine planes, with secondary roles of transportation, observation, and naval surveillance.

The Ecuadorian Navy requires all pilots to be sailors and to think like sailors. Years of experience has demonstrated what is needed at the controls of a navy plane is a pilot who fully understand the needs of the fleet.

The Cessna 337s served many years, but there is one flight that is remembered the most. It started as a routine training mission. The pilot was Lieutenant Jaime Almeida with Lieutenant Nelson Valencia as copilot. Alfa November-402 took off from Simon Bolivar airport at 1400 hours on October 2, 1975. The heading was to the west towards the middle of the Gulf of Guayaquil for a routine IFR training mission. At the 1500 hours, Alfa-November sent a distress call:

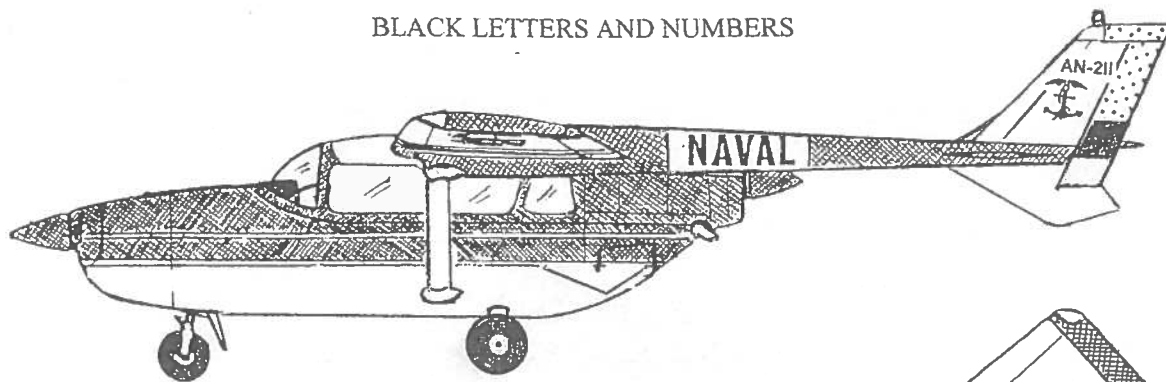
"MAYDAY! MAYDAY! This is Alfa November-402. Our back engine has come to a stop! We do not have enough height to get back to the mainland! Repeat! We do not have enough height to get back! We are going into the drink! Repeat. We are going into the drink. Notify the SAR!" The crash took place at Ocean Buoy #39 near the island of Palo Santo at the entrance to the Gulf of Guayaquil. By the time the water splash had dissipated, Lieutenant Valencia, who was near the door, had swam to a safe distance. The plane was sinking fast and Almeida was still inside, probably in shock or tangle up in his seat belt. He went down with the plane. The dredge *Tiputini* had witnessed the accident and rushed to the scene at full speed. But, for Lieutenant Jaime Almeida the rescue was too late. The Ecuadorian Navy organized a search to locate the pilot's body, but they didn't have any luck until the end of the second day of the search when the body of Lieutenant Almeida was found floating near Ocean Buoy #40.

The Cessna 337 remained in service with the Ecuadorian Navy until 1978 when it was replaced by the more capable IAI Arava of Israeli construction.

Jorge Delgado P. (SAFCH #862), PO Box 2207-URDESA, Guayaquil, Ecuador.

AVIACION NAVAL ECUATORIANA

BLACK LETTERS AND NUMBERS



MARKINGS OPOSITE UNDER WING

RED FUEL CAP

Cessna 337 Skymaster



YELLOW



BLUE



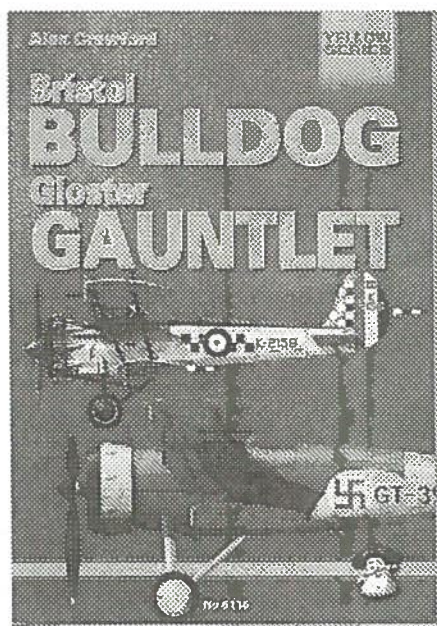
RED



ENTIRE AIRCRAFT WHITE



CAP JORGE DELGADO P.
(SAFCH # 862)



Bristol Bulldog and Gloster Gauntlet, by Alex Crawford. Mushroom Model Publications #6116. (2005). Mushroom Model Publications, 36 Ver Road, Redbourn, AL3 7PE, UK. E-mail: rogerw@mmpbooks.biz. Web site: www.mmpbooks.biz.

Alex Crawford's book on the Gloster Gladiator was reviewed in SAFO #107 (January 2004). He now follows up with the story of the Gladiator's predecessors, the Gloster Gauntlet and the Bristol Bulldog. Identical in format to the Gladiator book, this new book consists of 144 A-5 size pages with numerous photos (both b&w and color), 1/72-scale drawings, and color multi-view and side-view drawings.

The book is divided into four main sections: (1) The Bulldog story occupies the first 52 pages with chapters on "Development and production", "Entry into service", "RAF Bulldog camouflage and markings", and "Foreign service". (2) The Gauntlet story consists of 25 pages with chapters on: "Development and production", "Entry into service", "The Gauntlet goes to War", "RAF camouflage and markings", and "In Foreign service". Section (3), "Detailed photos", has 30 pages of color photos of museum aircraft. And, section (4), "Colour profiles", consists of 24 pages of color side- and multi-view drawings.

There are 1/72-scale multi-view drawings (devoid of markings) of the Bulldog Mk IIA, Mk IV, Mk IVa, and Mk TM 2 seater, and the Gauntlet Mk II. Scattered throughout the text are side-view drawings (24 Bulldogs and 4 Gauntlets) of just about every conceivable modification. For example, these drawings show that the Danish Bulldogs carried their guns lower on the fuselage than the other Bulldogs. [Ed: Converting the 1/72-scale Airfix kit of the Bulldog IIA into a Mk IV looks like a major undertaking. A kit of the Mk IV, or a conversion set would be appreciated by modelers wishing to add a Bulldog IV to their collection of Finnish aircraft.]

The section on "Detailed photos" contains of 32 color photos of the Bulldog IIA in the RAF Museum, 15 color photos of the Bulldog IV in the Finnish Air Force Museum, and 28 color photos of a restored Gauntlet currently flying in Finland. The "Colour profiles" section has drawings showing the colorful pre-WWII fuselage and wing markings of all the RAF squadrons that flew the Bulldog and Gladiator,

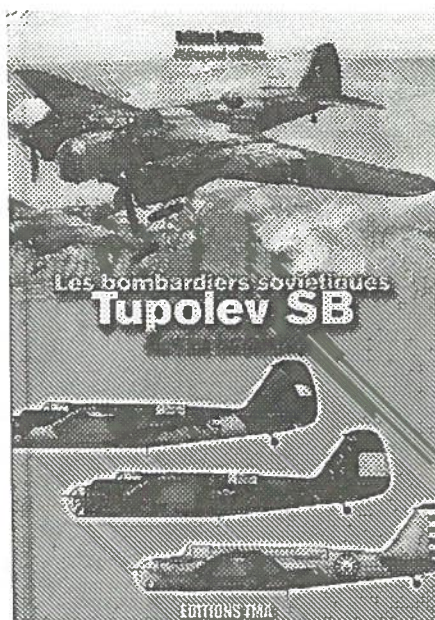
as well as drawings of camouflaged Gauntlets. This section also has side- and multi-view drawings of Bulldog and Gauntlet in the markings of all the foreign users.

In the main body of the text, 26 pages are devoted to non-RAF users of the Bulldog and 7 pages to non-RAF users of the Gauntlet. In addition, there are previously-mentioned photos of the Bulldog IV in the Finnish Air Force Museum, the photos of the restored Finnish Gauntlet, and the color drawings of the aircraft in foreign service. The breakdown of the coverage of foreign aircraft is as follows.

Bulldog: America (one page), Australia (5 pages, 6 photos), Denmark (3 pages, 5 photos), Estonia (2 pages, one photo), Finland 7 pages, 3 photos), Japan (one page), Latvia (3 pages, 3 photos), Spain (2 pages (one photo), Siam (one page, one photo), and Sweden (2 pages, one photo). Color side-view drawings: Bulldog: Denmark, Estonia, Australia, Finland (one, plus a 3-view), Latvia (a 3-view), Japan, Sweden; Gauntlet: Denmark (2 – one camouflaged), Finland (one, plus a 3-view).

This is an excellent book and is highly recommended to anyone interested in between-the-wars fighters and particularly to any modeler planning to build an example of a small-air-force Bulldog. [Ed: It's a shame that there is no 1/72-scale kit of the Gauntlet. The Danish Gauntlet is a truly handsome aircraft that would make an attractive model.]

Bristol Bulldog and Gloster Gauntlet is available from the publisher or from Squadron Mail Order, 1115 Crowley Dr., Carrollton, TX 75011-5010, USA for \$19.96 plus \$8.75 postage. The review copy was graciously provided by the author. □



Les bombardiers soviétiques Tupolev SB: Soviet Bombers, Collective research by Maslov, et al. Bilingual Edition. 256 A-4 size pages. Hardbound. (2004) ISBN: 2-915205-02-7. Published by Editions TMA, 75 rue Claude Decaen, 75012 Paris, France. €50 plus postage (€10 Europe and €18 rest of world).

Three cheers for Editions TMA. At last one of the French publishers who have been publishing such great aviation books has courageously tested the interest in English-language versions of their books with a bilingual edition. There choice of

subject is most appropriate: the world's first really fast twin-engine bomber, the Turbopolev SB. This chose should please the small-air-force enthusiast since the SB was used by several small air forces including Republican and Nationalist Spain, China, Finland, and Czechoslovakia. [Ed: A few years back Lela Presse "tested the waters" with an English-language edition of their book on Swiss Bf 109s. However, this experiment appeared to be short lived. I hope TMA has better success. TMA also has available an English-language edition of their book on the *Polikatpov I-16*, 192 pages. €30 plus postage (€7 Europe and €12 rest of world).]

This book is the results of the collected research of ten authors, each an expert in their particular area. Their expertise shows in the authoritative text that is nearly a "definitive" a work on the SB that you are ever likely to find. Each topic is covered in great detail with equal emphasis on acquisition and service use. The English translations are excellent with no stilted phrasing as found in many translations into English. The editor in charge of the translations should be congratulated on his dexterity with idiomatic English.

The breath and depth of the coverage is best illustrated by listing the chapters and their subheadings:

(1) "The SB": Prehistory, Birth of the High Speed Bomber, Beginning of service production, 1936, SB with M-100A engines, 1937, 1938, Aircraft Factory N°125 in Irkutsk, MMN, 1940, Dive Bomber, The Ar-1, Camouflage, Modifications and experience, The SB in civil operations (41 pages including 53 photos),

(2) "The SB in Spain" Republican Katiuskas (16 pages including 17 photos), Katiuskas with the Nationalists (9 pages including 11 photos).

(3) "The Avia B-71 Light Bomber and Reconnaissance Aircraft" (24 pages including 23 photos), The Avia B-71 B-71A and B-71B in Luftwaffe Service (8 pages including 18 photos). The SB in Slovakia (2 pages including 4 photos). B-71s in Bulgaria (3 pages including 10 photos..

(4) "The SB in China" (22 pages including 16 photos).

(5) "The SB in Poland. (One pages including one photo).

(6) "The SB in the War against Finland" (5 pages includes 3 photos).

(7) "Tupolevs under the Blue Swastika" The Finnish SBs, Welcome reinforcements, Reorganization and reform. (11 pages including 10 photos and a table of 172 Finnish victories over SB (includes date, location, and type, unit, & serial of victorious Finnish aircraft).

(8) "The SB on the Fronts of the Great Patriotic War" The Northern Front, The Second Northern Front, The Western Front, The South-West front, The Southern Front, Civilians in Combat, Forgotten Warriors. (42 pages including 41 photos).

(9) "Extracts from the memoirs of General Piotr Stefanovsky 'Trista Neizvestnyh'" (2 pages) Stefanovsky was a SB test pilot.

(10) "La France et le SB" (7 pages) The only section in the book without an English translation.

(10) "Photoscope" (13 pages with 42 photos of wrecked SBs).

(11) "Scale Plans and Cutaway Drawings" (8 pages) Multi-view scale drawings and cutaway drawings of the SB 2M-100A and SB 2M-103.

(12) "Extracts from the Soviet instructions for the SB" (16 pages) Sketches and photos of interior and exterior details (includes material from the B-71 manual).

(13) "Color Photos and Profiles" Color photos (one page): 3 Luftwaffe and one in a Russian

museum). Color profiles (25 pages): Spanish Republican: 9 side-views and four 3-views. Spanish Nationalists: 2 side-views and two 3-views. China: 4 side-views and one 3-view. Czechoslovakia: 3 side-views and one 3-view. Slovak: 2 side-views. Luftwaffe: 5 side-views and one 3 view. Bulgaria: 2 side-views. Poland: one side-view. Finland: 7 side-views and three 3-views. Soviet: 24 side-views and one 3-view.

The physical condition of the book is as good as its contents. The high-quality glossy pages are sturdily bound within heavy covers. The reproduction of the photos (many new to this

reviewer) is superb and the color illustrations are breathtakingly beautiful.

The *Tupolev SB* is an outstanding book that deserves "book of the year" honors, and certainly ranks as one of the ten best aviation books of recent time. No matter what your interest in aviation, you owe to yourself to buy this book. You will not only enjoy reading the authoritative text, but you will feast on the numerous photos and the beautiful color illustrations. The modeler will find many color schemes here to inspire him to pull a couple of those miserable Frog kits of the SB 2M-100 out of the attic and try to make reasonably accurate models of the

SB in small-air-force colors. (But, remember that the Avia B-71 had a single gun in the nose.) The modeler might even go out and purchase a couple of MPM kits to add the SB 2M-103 to his collection. (Can this kit be as bad as it was said in the reviews?)

Good sales of this book with hopefully encourage all French publishers to give serious consideration to coming out with English-language versions of some of their marvelous aviation books.

The review copy of this book was provided by Editions TMA. □

Aviation History Colouring Book

Ian K. Baker, 31A Mercer St., Queenscliff, VIC 3225, Australia. Booklets are obtainable by mail order to anywhere direct from Ian Baker. Prices vary, most being around A\$10-A\$15 within Australia. Many previous issues still available. Booklets are also stocked by several specialist bookshops and hobby shops. Find them on the Internet. USA: M&Models (Illinois). UK & Europe: Mushroom Model Publications (Herts). NZ: NZ Models (Invercargill).



#56 Flying Against the Rising Sun, Pt. 1. 32 A-4 pages.

Ian Baker's latest addition to his *Aviation History Colouring Book* series provides an insightful look at the markings and camouflage carried by the aircraft of the USAAF and the Philippine Army Air Corps immediately before and during the Japanese assault in December 1941. Before reviewing the content of this volume in detail, let Ian describe its purpose:

"The unfolding events and circumstances of the last months of 1941, culminating in Imperial Japanese attacks upon Pearl Harbor, the Philippines, Malaya and Singapore, with sweeping invasions of the Netherlands East Indies, Burma and New Guinea early 1942 are documented well enough. But what is not so well documented and can sometimes be quite problematic, is the subject of the appearance - the camouflage and markings of aircraft of the defenders... those who flew and fought against the Rising Sun.

"Looking into this fascinating subject area means straying away from the familiar and safe handful of WW2-era subjects so repeatedly raked

over by many who model, illustrate and publish. No apologies for including questions to which there are no ready answers. We get nowhere by endlessly revisiting the same old certainties.

"This 32-page book takes a thoughtful look at a selection of several diverse aircraft: Philippine Army Air Corps and US Army Air Force, mostly in the Philippines. Each has been chosen because it was considered to be of particular interest, for one reason or another. Each is carefully illustrated by means of a detailed ink and rendered drawing (a vanishing art in this genre) plus several not-too familiar photos supporting points made in the text. The book is part 1 of a broader study of this topic: other air forces and other interesting aircraft are planned for the future.

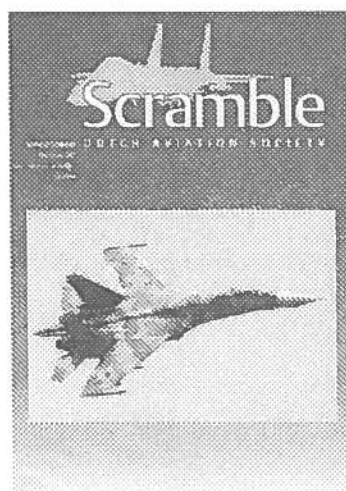
"This book is one for all those with an interest in camouflage & markings of past times, and may well assist many readers to assess the worth of certain information they may have encountered elsewhere. It certainly presents modellers with ideas for one or two new, and different, colour schemes. Whether it will settle many arguments remains to be seen."

Now let's look at the content in detail: The United States Army Air Force in the Philippines is covered in 14 pages. (1) North American NA-69: Using photos of Thai and Brazilian NA-69 (reproduced in the book) Ian concludes these aircraft were camouflaged in the US equivalents of RAF Dark Green and Dark Earth with bare metal undersides. Ian provides port, starboard, and top view drawings. (2) Seversky P-35A: Drawings are provided for two color schemes. A bare metal aircraft with hastily applied Dark Olive Drab water-soluble paint and a P-35 with standard Dark Olive Drab over Neutral Gray. (3) Boeing B-17C and (4) Boeing B-17E are pretty much what would be expected for the time period. Side-view drawings are provided for both B-17s along with a photo B-17E. (5) Douglas A-24 Banshee: These aircraft did not serve in the Philippines, but they did serve in the Dutch East Indies. They are described here as finished in standard Dark Olive Drab and Neutral Gray. Side-view drawings are provided for two Banshees along with two photos. (6) Martin B-10B: Ian concludes that these aircraft were painted aluminum with Bronze Green anti-glare panels. A B-10 is illustrated with side- and top-view drawings, and a photo is provided (7) Douglas O-46A: A side- and top-view drawing illustrates an aircraft in overall bare metal.

The Philippine Army Air Corps is covered in 8 pages. (1) Boeing P-26: The question of what markings and camouflage were carried by the PAAF Peashooters is very controversial and Ian investigates it in great detail. His conclusions are illustrated with a side- and top-view drawings of a PAAF P-26 with PAAF lozenges on the rudder and USAAF insignia on the wings. The camouflage pattern is two-tone brown with aluminum lower surfaces. It is possible that "PHIL ARMY" was painted on the undersurface of the wing. If this sound heretical, you'll have to read the steps Ian went through to reach these conclusions. (2) Stearman 73L-3. Ian's description of this aircraft is much less controversial: PAAF lozenges in four wing positions and on the rudder with Light Blue fuselage and Yellow flying surfaces. This scheme is illustrated with a side- and top-view drawing. (3) Beech Model 18. This one seems straightforward. Overall polished bare metal with black antiglare panel, insignia blue engine cowling and outer surfaces of the fins. PAAF lozenges are in four wing positions and on the outer surfaces of the fins. A side- and top-view drawing illustrates this scheme.

The remaining ten pages, titled *Some More Updates & Oddities*, includes two side-view drawings and three photos of Liberator F-7A *Patched up Piece*; a 2-view drawing of *Cootee 2* with background information on the origin of the USAAF national insignia with the small central red dot; reviews of four books; two photos of a Hurricane with an externally-mounted cannon; and photos of two B-24s painted in a very glossy anti-searchlight black.

While I have gone in great detail describing Ian's conclusions regarding the camouflage of the USAAF and PAAF aircraft in the Philippines, space does not allow me to go into much detail on the type and placement of the markings, particularly of the USAAF aircraft. Most of Ian's conclusions are contrary to conventional wisdom. However, he carefully explains his reasoning and is not dogmatic about his conclusions. I hope these comments have tweaked your curiosity (or your ire). Anyone interested in doing illustrations or modeling aircraft of this time and place should consult this publication before putting paint to paper or plastic. The rest of us should obtain *Flying Against the Rising Sun, Part 1* for the pure joy of reading an exciting "detective" story. And, *Part 2* promises to be just as controversial and interesting. □



Scramble is the monthly publication of the Dutch Aviation Society covering "... almost all aspects of the civil and military aviation scene." The text and photo captions are in Dutch with an occasional entry in English, and there is a 4-page insert with "Translation of expressions often used in Scramble".

The issue at hand for review is July 2004. (This issue is also numbered "302" indicating that *Scramble* has been around for a long time.) This issue consists of 120 A-5 pages (148 mm by 210 mm) with table after table of data and numerous photos. A list of the chapters should give some idea of the contents. "Movements Nederland", "Movements Elders Militair", "Civiel Nieuws", "Fabrieksnieuws", "Jetliners", "Proplines", "Fokker Nieuws", "Bizjets", "Bizprops", "Helispot", "Soviet Updates", "Nederlands Register", "Wrecks & Relics", "Stoffer & Blik", "Scramble Intelligence Service", "Militair Nieuws", "Military Updates", "Showreports", and "Triptease".

The areas of most interest to SAFO readers are probably those dealing with military aircraft. As an example "Militaire Updates" consists of 15 pages and 13 photos covering all countries of the world. Photos of small-air-force interest are: Spanish Eurofighter, Swedish Gripen, Pakistani 707, Dominican Republic UH-1H & Schweizer 333, and Mexican E-2 & ERJ145. The text in this chapter is entirely in English. Another chapter, "Triptease" reports on a visit to Japan with tables and 6 photos (F-4EJ, UH-60J, T-4, F-15DJ, C-1A, & E-2C.) Other photos of small-air-force interest include Ukrainian Su-27 (in color) and Oman Super Mushhak, Hawk 103, & Skyvan.

Subscription for 12 issues is €61.50 Europe, €95.00 other destinations. Payment (in Euro currency only) by IMO, or cheque. Add €12.30 if paying by cheque. Credit cards are acceptable, but fees must be added, e.g., the total cost of a subscription by credit card is €64.00 for Europe or €99.00 for other destinations.

[Ed: A sample issue of *Scramble* is available from the SAFCH Sales Service for \$5.00 postage included.]□

Aero Journal. Bimonthly publication. 76 A-4 pages. Aero-Editions International, BP 31 - 47551 Agen-Boe Cedex 1, France. E-mail: aeroeditions@free.fr. Six issues €45.00. Credit cards accepted.

France seems to have a larger number of magazines of interest to the enthusiast of aviation history than most countries: *Avions* and *Air Magazine* are familiar to SAFO readers through our

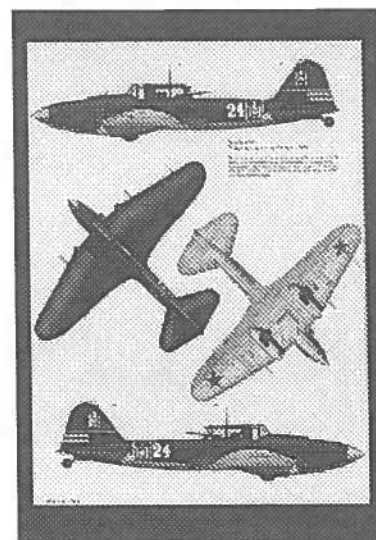
"Abstracts" column. To this list can be now added *Aero Journal*. I've recently received on loan from an SAFCH member four recent issue of *Aero Journal* and they are to the same high quality of research and presentation as the two publication mentioned above. The issues at hand each consist of 76 A-4 pages of high quality glossy paper with excellent reproduction of photos and beautiful color drawings. The summary of the four issues given below should give a good idea of the coverage. Of particular note is the large number of color drawings. If some of the titles look familiar, they should for they are written by SAFCH members and are based on articles that first appeared in SAFO. However, in *Aero Journal* these articles are improved by adding more photo and color art work. All text and photo captions are in French.



#41 Fev/Mars 05 (76 pages) "Aero-Bibliothèque" 2 pages with 15 book reviews. "Bearcats sur l'Indochine" 28 pages including 51 photos, 12 color side-view drawings (all French), and a map showing the pre-WWII provinces (?) of Cochinchina, Annam, & Tonkin. "Piege en haute mer" 2 pages including 2 photos and a color side-view drawing of a RCAF Stranrer, Centerfold: "O comme observations" 2 pages with 14 color side-view drawings of observation aircraft of WWII combatants including Romanian, Finnish, Polish, and Czechoslovak. "Mohawk dans le ciel d'Ethiopie" 5 pages including 5 photos, 2 color side-view drawings, and a map. "Les belges et le CF-100" 3 pages including 3 photos and 2 color side-view drawings. "Le Loire 70" 5 pages including 6 photos and 2 color side-view drawings of this trimotor (2 tractor and one pusher) flying boat. "Du Lysander au Mustang" Le n° 309 Squadron 5 pages including 7 photos and 4 color side-view drawings. "Oslo-Fornebu 9 Avril 1940: La premiere defaite de la Luftwaffe" 7 pages including 9 photos and 2 color side-view drawings (Norwegian Gladiator and Luftwaffe Me 110). "Le Mariner la RAF: Un hydravion mal aime" 3 pages including 3 photos and a color side-view drawing. "La chasse francaise 1939-1945 (41): Le GC1/10" 2 pages including 4 photos and a color side-view drawings (MS 406). "Nomad: Le bien nomme" 2 pages including 2 photos and a color side-view drawings of RCAF Northrop Nomad. "Douglas SBD-1" a color 3-view drawing.



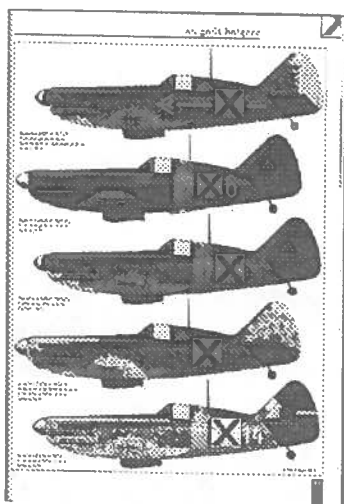
#42 Aril/Mai 05 (76 pages) "Les kangourous dans le desert: Le n° 3 RAAF Squadron sur Gladiators" 6 pages including 8 photos. "Jabos sur Londres" 18 pages including 17 photos and 14 color side-view drawings [Me 110 (4) & Bf 109 (10)]. "La chasse francaise 1939-1945 (42): Le GC II/10" 4 pages including 5 photos, and 4 color side-view drawings (D.501 & MB.151/2). "Le Blackburn Botha" 4 pages including 6 photos and 4 color side-view drawings. Centerfold: "Chasseurs da Commonwealth" 2 pages with 15 color side-view drawings, "Le defenseurs de l'Olympe" 6 pages on Greek PZL P-24s including 7 photos, one color side-view drawings, and table of victories. "Tragique meuprise aux Baleares" 2 pages including 2 photos and a color side-view drawings (Spanish S.79). "Les Mexicains dans le Pacifique" 7 pages including 10 photos and a color 4-view drawing (P-47D). "Les P-47 de la 5th Air Force" 8 pages including 11 photos and 14 color side-view drawings. "Une dissuasion peu dissuasive ..." 3 pages including 3 photos and a color side-view drawing (B-17D). "De l'ocean Indien a l'Italie: La guerre de John Harris" 5 pages including 5 photos and 2 color side-view drawings (RAF Baltimore). "Aero-Bibliothèque 2 pages with 12 book reviews. "Spirit of St. Louis" one page including one photo and a color side-view drawing (BOAC Curtiss C-55). "Mongolian Il-2" one page with color 4-view drawing.





#43 Juin/Juillet 05 (76 pages) "Le Potez 63.11 au combat" 36 pages including 42 photos, 9 color side-view drawings, one color 3-view drawing, and 26 unit badges in color. Centerfold: "La chasse française 1950-1960" 2 pages with 12 color side-view drawings. "Riddle's Raiders: Le 479th Fighter Group au combat" 9 pages including 8 photo and 9 color side-view drawings [P-38 (4) & P-51 (5)]. "Les Ventura de la RAF: Une malheureuse aventure" 7 pages 5 photos and 3 color side-view drawings. "Des Mustang au pays des rennes" 5 pages on Swedish P-51 including 7 photos and 4

color side-view drawings. "La chasse française 1939-1945 (43): Le GC III/10" 4 pages including 8 photos and 3 color side-view drawings (Bleriot-Spad 510 and MB.151/2). "L'évade de la Saint Maurice" 5 pages including 4 photos and a side-view drawing (Douglas Boston). "Les Osprey dans l'enfer du jeu" 2 pages on Portuguese Hawker Osprey including 2 photos and a color side-view drawing. "Aero-Bibliothèque" 2 pages with 13 book reviews.



#44 Aout/Sept 05 (76 pages) "Les cavaliers de l'Apocalypse: Le 509th Composite Group" 34 pages including 23 photos and 8 color side-view drawings (B-29). "Le bossu mal aimé: Le Fiat G.50" 8 pages

including 10 photos and 10 color side-view drawings [Italian (7), RAF (1), Croatian (1), & Luftwaffe (1)]. "Le Brewster XA-32: la brute de Long Island" 3 pages including 3 photos. "Le VL Pyry" 4 pages including 8 photos and 3 color side-view drawings. "Des Divoitine au gout bulgare" 4 pages on Bulgarian D.520 including 5 photos and 5 color side-view drawings. "Les dessous à la mode Focke-Wulf" 4 pages including 5 photo and a color 4-view drawing (Ta 152H). "A fond la caisse! Le 1^{er} GAvCa en Italie" 8 pages on the Brazilian P-47 in Italy including 5 photos and 4 color side-view drawings. "Aero-Bibliothèque" 2 pages with 14 book reviews. "Le Guerre en couleur" 2 pages including a color 4-view drawing RAF Camel and 10 color side-view drawings of WWI fighters including British, French, German, Belgian, and Italian.

There is not much to choose between the three French magazines. They are all excellently produced and all contain many articles of direct interest to the enthusiast of the small air forces. The enthusiast with lots of money to spend on his hobby would not be wrong in subscribing to all three magazines. The rest of us will have to make a choice. *Aero Journal* has a slight edge on the others because of the number and quality of the color drawings. On the other hand, *Aero Magazine* excels with its scale drawings, while *Avions* is best noted for its photo coverage. Perhaps one of these excellent magazines will break out of the pack by providing English text. □

Batailles Aériennes

Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. E-Mail: Lela.presse@wanadoo.fr. Web Site: www.avionsbateaux.com. Four issues 32 Euros.



#33 Barbarossa: Ruée vers le sud. La défense de la Crimée (1^{re} partie).

This is another excellent issue of Lela Presse's series devoted to the aerial warfare in WWII. There are numerous never-before published photos and dozen of colorful side-view drawings. The presentation of Soviet and Luftwaffe subjects is well balanced, and this review particularly like to extensive coverage of the aircraft of the Soviet Black Sea Fleet. Unfortunately for the small-air-force enthusiast, there is little of direct interest – only one photo of a Romanian Hurricane. However, 9 photos of Romanian ground and naval forces are most welcome.

The coverage is in the usual *Batailles Aériennes* style with emphasis on the air war, but with just enough photos of land and sea operations to put the air war into perspective. There is only one map, but it shows the locations of such evocative names as Balaclava, Sebastopol, Kertch, and Yalta. For readers with a knowledge of the French language, the chapter titles are: (1) Les forces aéronavales soviétiques. (2) Veille d'armes et premières escarmouches. (3) La bataille de Perekop. (4) Le calme avant la tempête. (5) Chute de la Crimée.

One photo that stands out in this reviewer's mind shows a flight of three 2-seat I-16UTI with fixed landing gear. There are 25 color side-view drawings: I-153 (2), MiG-3, I-16 (2), I-16 SPB & TB-3 (Zveno), Pe-2, SB, MBR-2 (2), MTB-2, GST, DB-3, KOR-1, I-5, LaGG-3, Yak-1, Bf 109 (5), Ju 87, He 111.

Tables include the Air Order of Battle for Soviet aviation in the Crimea for 20 September 1941 and 18 October 1941. Other tables summarize air operations by time period listing number and type of Soviet aircraft participating and number and type of Soviet aircraft lost and enemy aircraft claimed.

The presentation is brought to an end by the usual departments on uniforms and modeling aircraft relevant to the topic: "Uniformes et Tenues se Vol" 2 pages with color drawings of 10 Soviet and Luftwaffe airmen in uniform. "Messerschmitt Bf 109 E4/7 Trop" 3 pages on building the 1/48-scale Revell kit, including 9 color photos of the completed model. □

Fokker C.VII-W, 1/72 scale resin kit by Chorosy Model-bud (Poland).
Price 27 Euros.

The kit comes in a small A5-size cardboard box containing almost 70 resin parts, one oversized A4 instruction leaflet (printed on both sides) and one well-printed decal sheet for three individual planes. The instruction leaflet includes history of the aircraft, shows construction details and side-view drawings of both a pre-war red-white-blue and an orange triangle-marked MLD training aircraft and Netherlands East Indies ship-based aircraft. The paint scheme for all aircraft is silver dope overall with gray floats.

The resin parts are well cast. The upper wing and floats come as separate items, each molded as one piece. The lower wings, fuselage, stabilizers and wing struts each come as left and right side parts. The fuselage parts have very good interior detail.

The rest of the smaller parts are supplied on carrier sprues containing many optional extras. Separate parts are included to build either a training or machine gun-armed version, fitted with or without an anchor and there is a choice between metal or wooden propeller. In this reviewed kit some parts were not present, some were supplied double and some rear seat parts are not numbered. Be prepared to make some parts yourself.

A much-appreciated extra of this kit is the supplying of the beaching gear for this plane. This was used to transfer the plane from the water onto land and into its protective sheltering. It's an item perfectly suited for diorama modeling.

Fokker C.VII-W, 1/72 scale resin kit No.309 by CMK (Czech Republic). Price 40 Euros.

The kit comes in a plastic bag containing 36 resin parts, a 3-D diagram printed on an A4-sized leaflet serves construction purposes. Decals are not supplied; neither are there any color instructions.

The resin parts are of very good quality. The upper wing and floats come as separate items, each molded as one piece. The lower wings, fuselage, stabilizers and wing struts each come as left and right side parts. The fuselage parts have some basic interior detail.

The smaller parts come in the form of three wafer pressings. Some siruts connecting fuselage and floats have to be made by stretching polystyrene sprue. Optional items are a machine gun or camera fitting for the rear seat and an anchor for an aircraft based in the Netherlands.

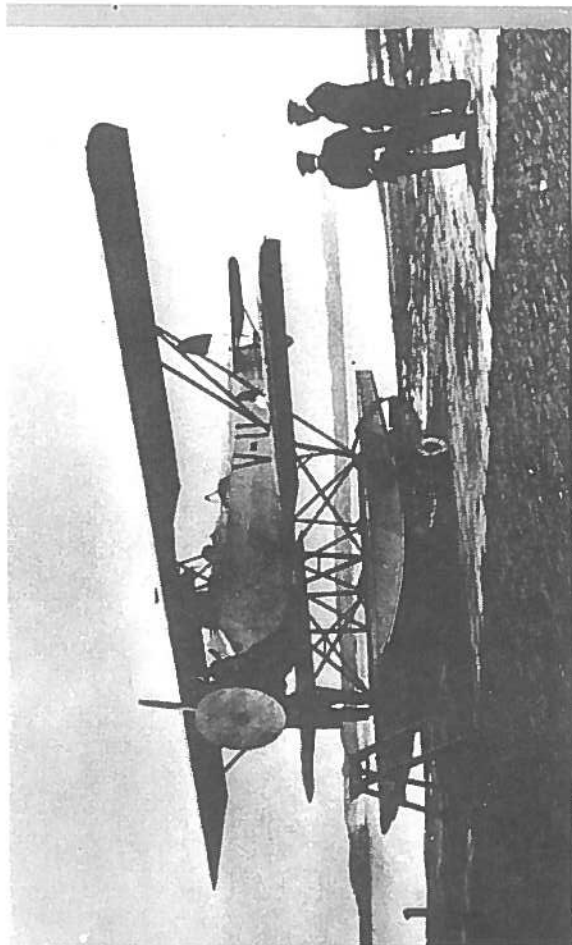
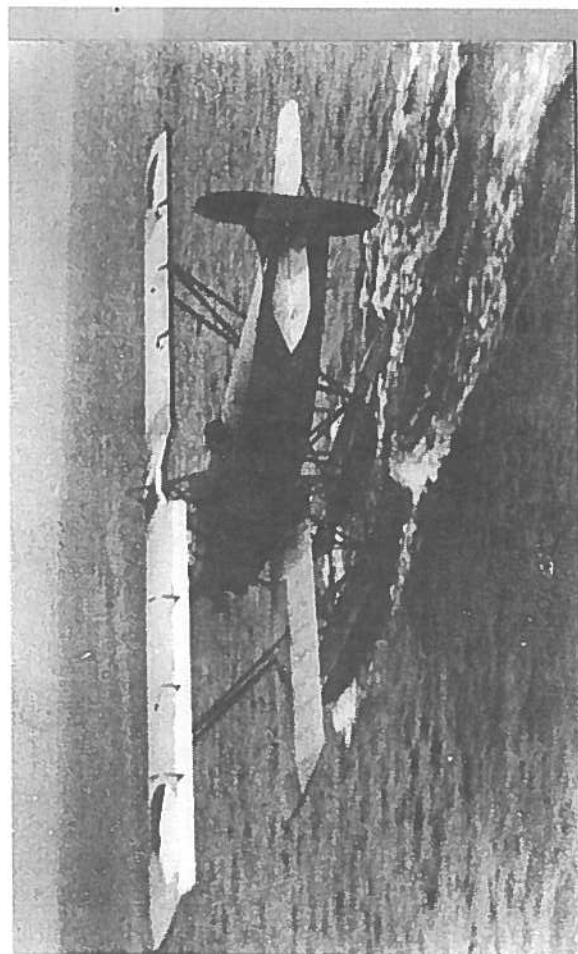
Comparison and conclusion.

Both kits offer a perfect base to build a Dutch Fokker C.VII Water plane. The Czech model was originally produced in the 1990s in cooperation with the Dutch IPMS and has recently been reissued in its original form by CMK, but without instruction leaflet and without decals. The surface detailing of the Polish model is somewhat better than the Czech one, probably because the Polish kit was produced about ten years after the Czech one. Personal modeling techniques can add or remove much detail of the original kit. So perhaps the price of the kit makes a difference. Looking at both prices—which are without Postage & Packing—I think that contacting the Polish producer directly might end up being the better deal.

Chorosy Model-bud, Czernichow 371, 32-070 Krakow, Poland.
Web Site: www.modelbud.pl, E-Mail: /modelbud@wp.pl.

CMK is sold by Luchtvaart Hobby Shop, Molenvweg 249, 1436 BV Aalsmeerderbrug, Netherlands. Web Site: www.lhshop.nl. E-Mail: fo@lhshop.nl.

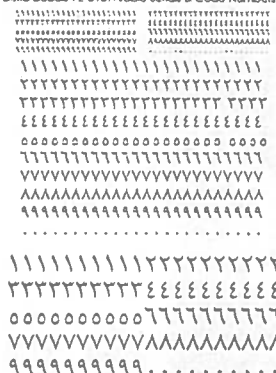
Frans Scheve (SAFCH #890), E-Mail: fscheve@hotmail.com.



Following the V-series, an additional 18 C.8Ws were acquired in 1930-32 as floatplane trainers, or a "L-series" (hence the L-series numbers), based mostly at De Mok. Here "L.12" taxies out for take-off on a training sortie. Although hard to distinguish in this view the anchor is strapped to the side beneath the rear cockpit. (Thijs Postma Collection)

Fokker C.7W "V-11" was one of 12 of this type acquired in 1928-29 for service as shipboard floatplanes in the NEI. Here it is shown ashore, on its beaching gear, for maintenance and synchronization of its forward firing 7.9mm machine gun. The disk mounted to the prop hub was to record the bullet impacts for adjustment of the synchronization gears. (This Postma Collection)

Delta Decals 72-013: Arabic Serials & Code Numbers



Arab Serial Numbers & Codes. Delta Decals 0072-013. £6.50. GA Enterprises, 52 Holdings Roas, Sheffield S2 2RE, England. E-Mail:

dektadecalsuk@aol.com. Web

Site:

Glenn Ashley's latest release is a 128 mm by 180 mm (5 inch by 7 inch) sheet featuring Arabic script serial and codes number in three different sizes (approximately 2 mm, 5 mm, and 7 mm). The serial numbers are sharply printed in black. The "instruction" sheet consists only of a photo of a Lebanese T-6 '١٢٤' and a table showing which symbol matches which number.

1 2 3 4 5 6 7 8 9 0
١ ٢ ٣ ٤ ٥ ٦ ٧ ٨ ٩ ٠

This sheet is ideal for the modeler wanting to build models of Arab aircraft of using the national insignia provided by Zatz decals ZTZSP1 (see review in SAFO #114 July 2005, page 69). They will also be useful when building one of the many

kits containing decals for the Arab national insignia, but lacking the proper serials.

Review decals graciously provided by Glenn Ashley of Delta Decals.

[Ed: One sheet of these new Delta Decals is available from the SAFCH Sales Service for \$10.00 including postage.]



-letters-

"I am running behind on so many things again, but have finally had a bit of time to digest Vol.29, No.1, (113) for July 2005 and wanted to jot off a few observations while still fresh in my mind. I was delighted to see my good friend Santiago Flores set down, finally, the first very well reasoned description of the confusing Mexican TNCA enterprise that has appeared in English. He has really done a superb job with this. He has fallen victim, however, to a number of presentations that I have seen repeated so often in Mexican reports and literature on the subject, that I feel have roots, basically, in typographical errors that were introduced into the reportage decades ago. Since they are rather central to the evolution of a number of key types, I thought I had better make some attempt to comment on them.

"On page eight and nine, there are a number of unfortunate typos or mis-spellings that seemed to have slipped through the cracks. The Mexicans acquired Kantner-Moisant monoplanes (not 'Kanter-Moisant') and I believe the engine built by Santarini was an Aztatl (not 'Aztalt'). The Serie B aircraft had Salmon engines (not 'Salmon') and I believe the Italian and French aircraft acquired were Ansaldo (not 'Analog') and Farman (not 'Forman'). Last time I checked, Avro built the basic 504K (not 'Afro') and Ing. Lascrain y Osio built and designed the Quetzalcoatl aircraft (not 'Quatzalcoatl'). Finally, on page 9, I was amazed to see the report that, besides Guatemala and El Salvador, Santiago says that Panama got an Anahuac. Never heard of that before and would like to learn more about the source of this astonishing report.

"On page 10, in Table #4, I believe we want Nieuport rather than 'Newport', but I confess that I have NEVER heard of a marriage between the Huntington biplane and any Nieuport design to produce the Serie F. The Huntington was a biplane and most of the Nieuport designs associated with Mexico were monoplanes, if not all. Also on page 10, under TNCA 3-E-130 Fighter, I believe the 'popular' name of the aircraft was Tololoche rather than 'Totoloché'.

"Santiago noted that the TNCA Biplano Militar Tandem No.1 (prototype of the Serie A series) went to El Salvador in 1916. Actually, it was handed over on either the 20th or 23 of February 1917.. Santiago suggests in his listing that it was either the 'prototype' Biplano Militar Tandem No.1, reported as 1 A 9, or 2-A-9 or 1-A-13! Which is correct?

"Santiago quotes the 'Aircraft school type with Ford engine named 'Guajalote' as put in service January 1, 1916. I have the spelling on this popular name as also possibly 'El Guajolota' and first noted September 1915. It may also be worth noting that Jose Villa believed that this aircraft was constructed with major components of the famous Martin pusher 'Sonora' and it was used only as a 'penguin' type trainer.

"Other comments: 5-H-57, not on Santiago's list, was current circa March 1919, and must be assumed to have been a Parasol Serie H. 12-H-63 and 13-H-64 were also reported circa 27 September 1921, which seems to clash with Santiago's 39-A-63 and 40-A-64. Where Santiago has 4-H-65 for a Parasol Serie H, I have 14-H-65, but I'm not sure which is correct. 1-C-73 is missing from his list, another Curtiss JN-4. 2-D-80 was, I believe, a SVA-10, not an A.300. 4-E-133, a TNCA 'Sesquiplane' with a 185-hp BMW engine, was not on the list. Jose Villela once showed me a photo of this aircraft. 95-A-192 was reported to me (by Santiago) as being the highest known Anahuac code, yet it is not on his list. If that was in fact a valid code, that leave ?-190, ?-?-191 unknown as well."

Dan Hagedorn (SAFCH #394), 13125 Pennerview Lane, Fairfax, VA 22033, USA.

[Editor's note: I'm afraid I must take most of the blame for the typos. "Forman", Newport", and "Afro" - instead of "Farman", Nieuport, and "Avro". I'm afraid I was so intent on checking the more exotic spellings that I let these whoppers get through.]

"When you run my ad in SAFO vol.28 no.4 (112)April 2005 page 111, somebody answer it, but since I did not have Internet for some time, I could not answer it. Do you think there will be a way to get in touch with that fellow? I cannot recall his name.

"In another matter we just printed some brand new decals for our vacu-form kit of the Saunders Roe SR A/1; the world's first flying boat jet fighter. We are up-dating this old kit, adding interior, etc. The same will be with the Bristol T.188 hypersonic research aircraft, another oldie but goodie vacu-form."

Ron Ferreyra, (SAFCH #482), 757 Emory St. #106, Imperial Beach, CA 92032, USA.

"While in Holland this past September, I had a chance to visit the Dutch Naval Museum at Den

Helder, and I've acquired a book by Dutch Navy expert Nico Geldhof (co-author of the Hawker Sea Fury book you reviewed) called 70jaar MLD. Between these two sources I've learned of a couple of errors:

"One is that the first MLD aircraft (the HF-20) was serialized "MA-1", not "M-1". It was later returned to the LVA as "LA-9". The first three HF-22s were serialized "M-1" thru "M-3" (Not just M-2 and M-3), later changed to the "A" series.

"Second, that the De Ruyter cruiser had seven--not 8--5.9in guns. I was surprised to see photos--and an outstanding model in the museum--showing the second turret having only a single gun tube! I had actually had conflicting information (between Janes' WW2 Navies and my other sources) of 7 and 8 guns, and went with eight since it made sense that the ship would have dual gun turrets. Now, as usual, I stand corrected."

Doug Dildy (SAFCH #844), 3813 Madrid Dr., Albuquerque, NM 97111, USA

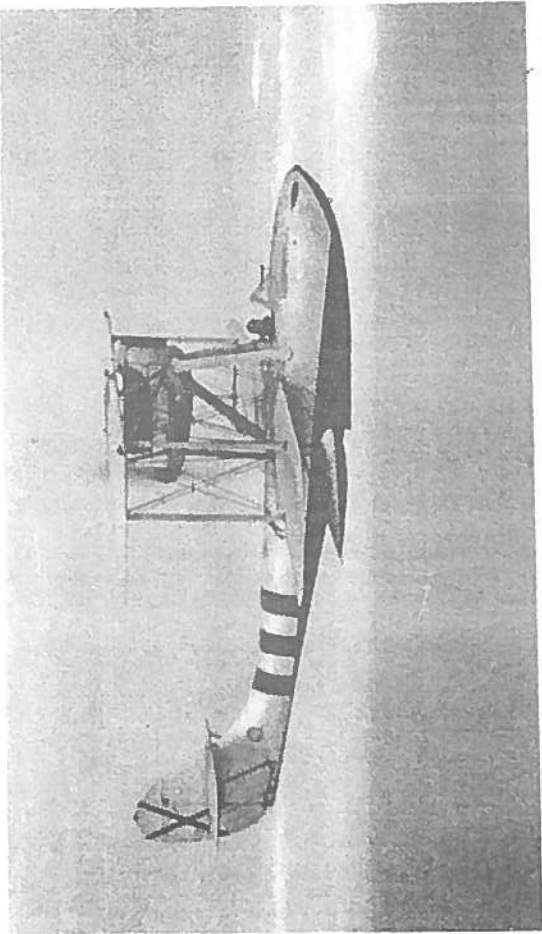
"I've been impressed by the series on the Dutch air force in 1940. I think we 'English-speaking people' may focus so much on the accomplishments of the English (and German strategic errors) later that year that we overlook the impact the Dutch had on German air strength when they chose to sacrifice themselves with all-out resistance to the Germans rather than mounting only token opposition. Thailand (under a significantly different set of historical and political circumstances) contested Japanese passage for less than day although historians may still differ on whether the Thais were 'overwhelmed' by the Japanese or merely fired enough shots so that could claim they'd resisted in case the Allies won.

"I am always opposed to political 'bashing' or agendas in historical research but applaud research that adds to our knowledge or challenges our perspectives. I'd read before of the German losses, but this series brought home their significance in ways that other materials have not."

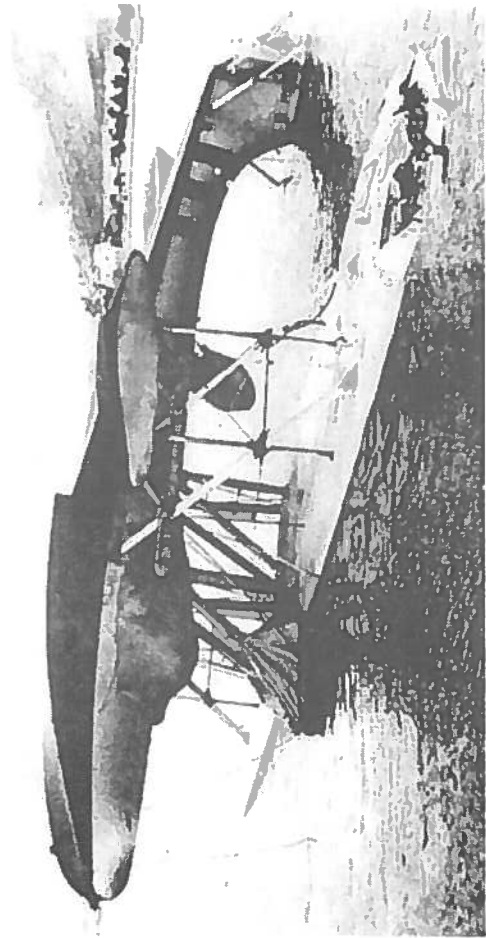
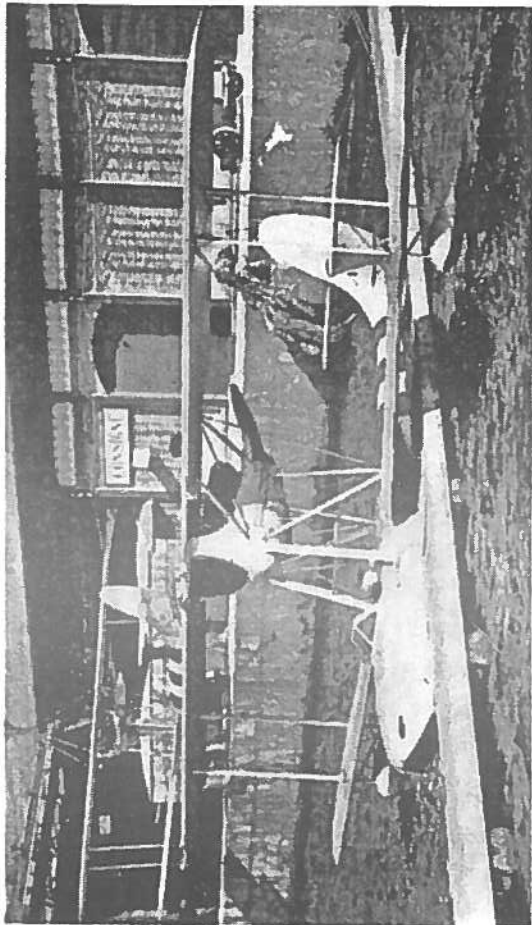
John Berger (SAFCH #1389), PO Box 23109 Honolulu, HI 96823, USA.

"I still have 16 copies of the North American T-6 in Uruguay booklet. SO I hope that SAFO #114 will sell a few. Demand seems to be greater abroad, and I will ship for \$20 or 20 euros."

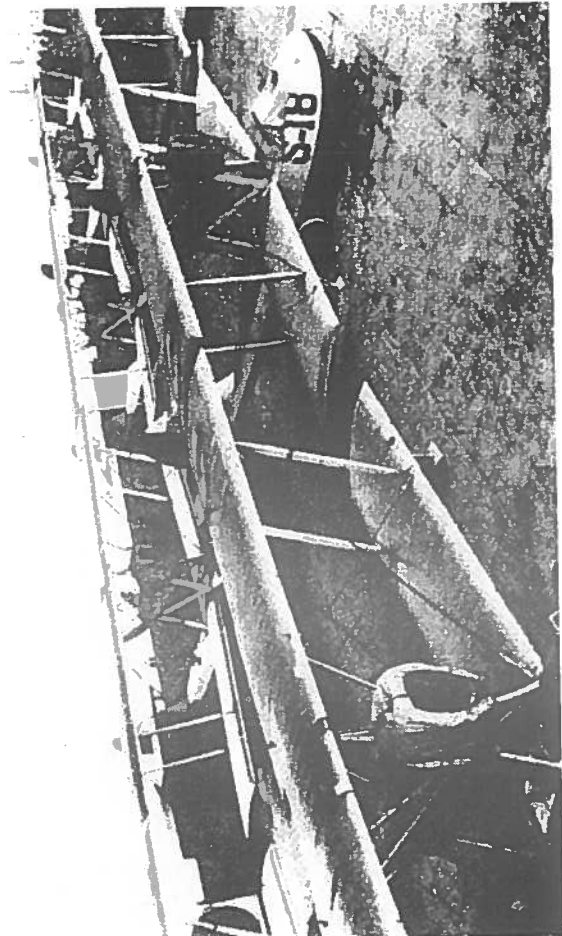
Gary Kuhn (SAFCH #257), 23 Crusader Ave. E #D, Saint Paul MN, 55118-4478, USA.



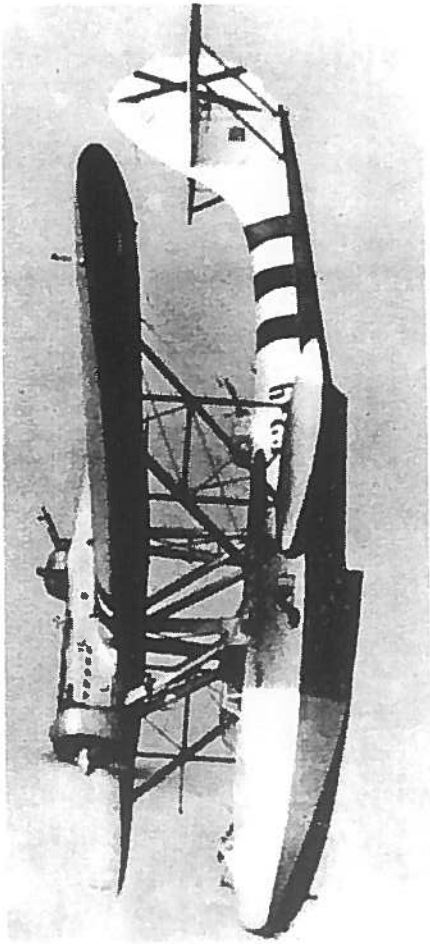
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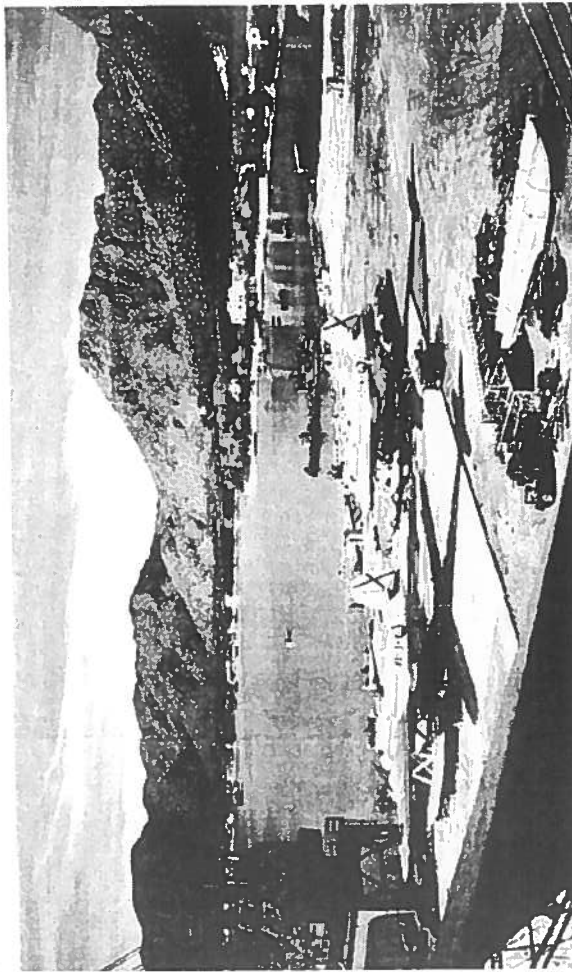
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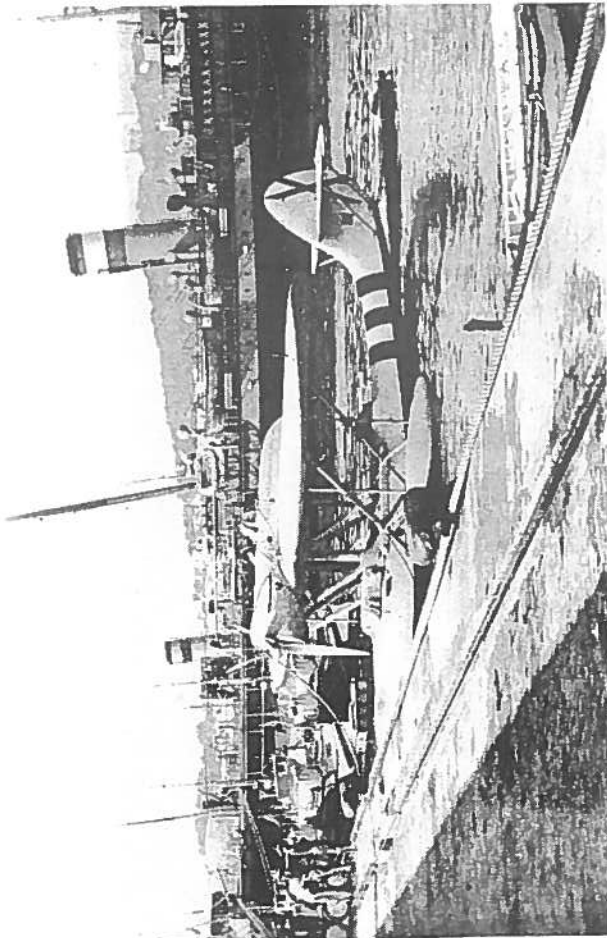
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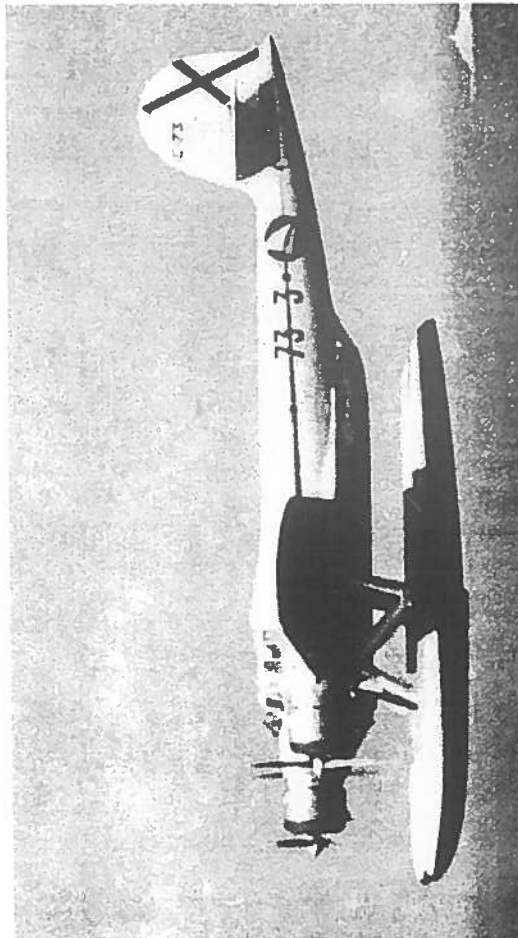
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